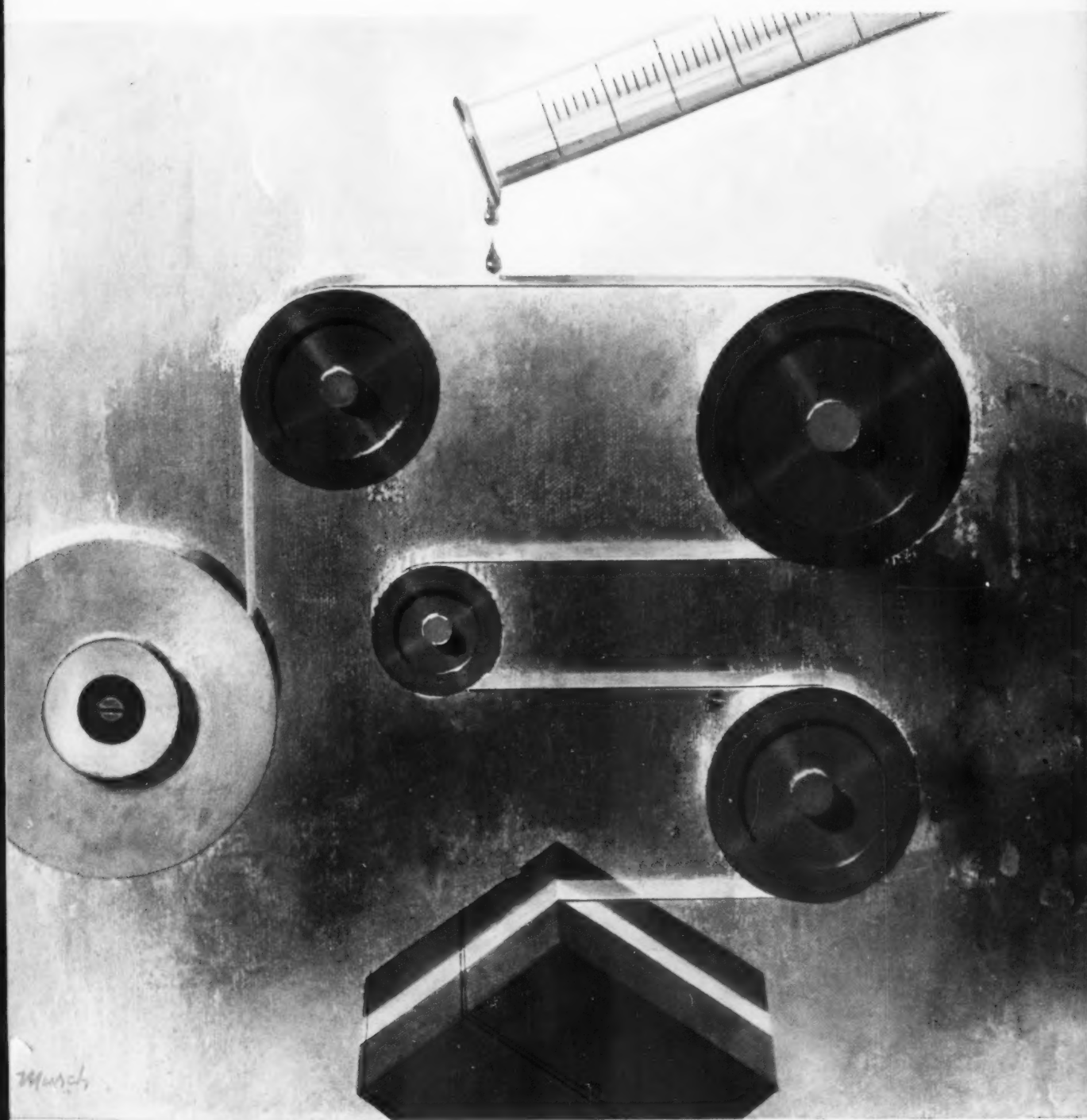


MODERN PACKAGING



AN ORIGINAL OIL PAINTING FOR MODERN PACKAGING BY WALTER MURCH

GREAT PACKAGING DISCOVERIES: *Pressure-sensitive tape—p. 88* | **MARCH 1959**

Background for Packaging, p. 39 | *World Report, p. 59* | *Question of the Month, p. 106* | *Complete contents, p. 2*

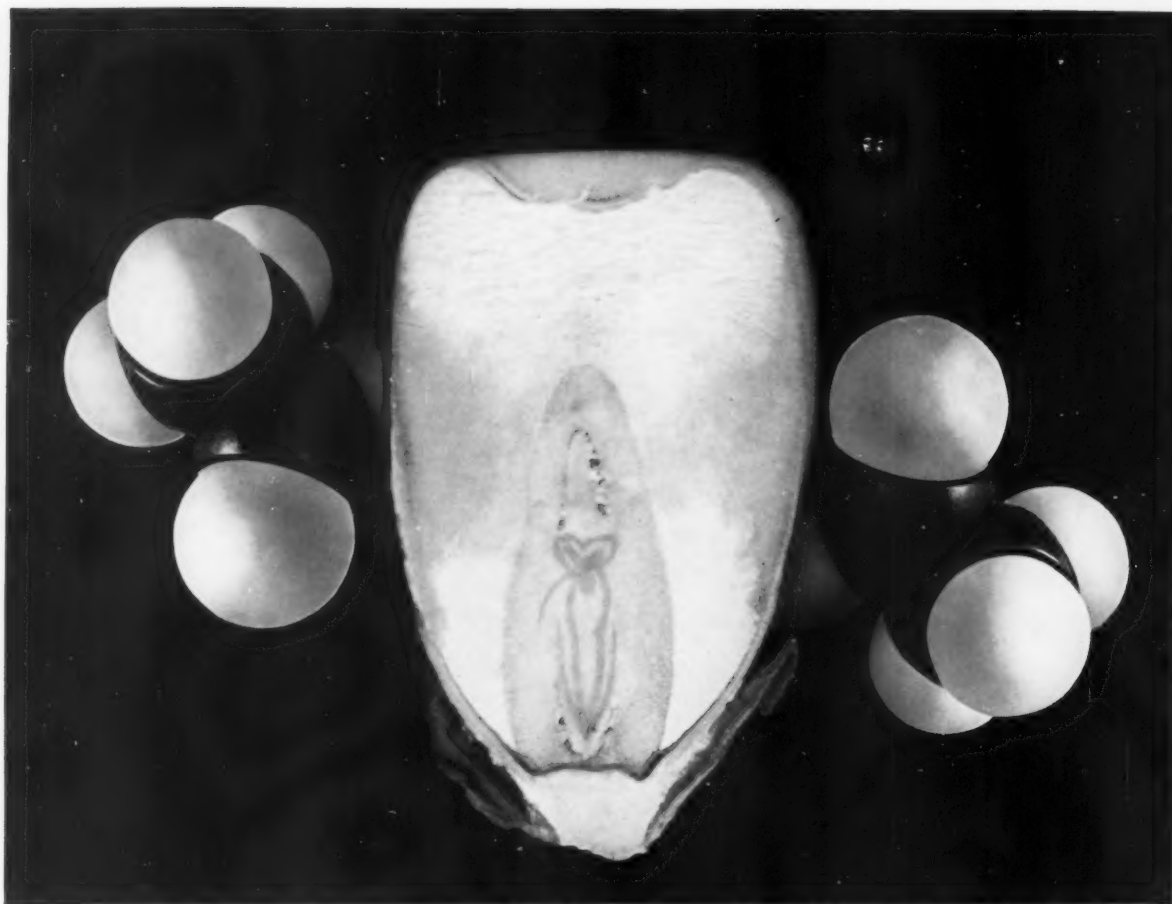


Illustration of magnified kernel of corn, courtesy of CORN INDUSTRIES RESEARCH FOUNDATION, INC.

How 'new chemistry' is modernizing adhesives

Our 'new chemistry' research has successfully cross-linked our unmatched knowledge of starch properties with our advanced knowledge of vinyl resins. The results have been exciting. Because we have eliminated many of the limiting characteristics of starch based adhesives.

Applied to packaging, this 'new chemistry' has produced adhesives that grip instantaneously to greatly increase machine speeds. Soft sealed cases now ship tightly closed yet open easily. Shipping cases with glued corner laps withstand blistering summer heat in boxcars. Phonograph record jackets are wrinkle-free and warp-resistant. To mention a few.

These modern adhesive developments are improving case and carton sealing, lap gluing, bag making, tube winding and the many other packaging and converting operations. We'd like to demonstrate their effectiveness in your own plant.

Too, we'd like to keep you informed of things to come. As a major producer of starch specialties—and a pioneer producer of vinyl resins—National is leading the way through 'new chemistry' to great advances in the field of adhesives.

RESYNS[®]

National

ADHESIVES

NATIONAL STARCH PRODUCTS INC.

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Quality
Control
PACKAGING



FINEST BATTLE DRESS FOR A SALES FIGHT

There's a challenge for thoughtful executives in the unique capabilities of this outstanding packaging film created by Goodyear:

Today's executives, regardless of their particular areas of responsibility, are merchandising- and cost-conscious.

Getting their product to market in appealing mill-fresh condition is of paramount importance.

Gird a product in Vitafilm—unique polyvinyl chloride transparent film developed by Goodyear—and half the battle for sales is won.

The facts are as pleasing as the new low cost of Vitafilm:

- Some transparent films "distort" with age or humidity change. Vitafilm by Goodyear does not. It endures the sales life of the merchandise—stays snug, crystal clear and appealing.
- Many transparent films refuse to heat-seal surely; the result is split and broken packages—soiled merchandise or costly rewrap. Vitafilm heat-seals easily to a welded seam every bit as rugged as the strong film itself.
- What's more, Vitafilm doesn't attract dust—prints beautifully—is so rugged it can be used to "bundle" groups of small units—eliminates expensive unit cartons.

- The clincher is what appeals to every packaging engineer: the wonderful way Vitafilm adapts to automatic, high-speed packaging-machine operations.

If you deal in textiles, paper products, hardware items, pharmaceuticals or food products—let the Goodyear Packaging Engineer send you detailed proof of the many Vitafilm advantages.

You can reach him by dropping a line to the following address. No sales pressure will be put on you because the man's a technical man—and he prefers to rest his case on the simple, convincing facts!

Address: Goodyear, Packaging Films Dept.
C-6418 Akron 16, Ohio.

Vitafilm
by

GOOD YEAR

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

The best thing between you and your customer

75 **New aspects of multipacking**

Thanks to ingenious new packaging constructions and new machines that offer flexibility or single-purpose high speed, the practice is spreading far from its original objective, with the promise of even greater growth in the years ahead. It is now possible to multipack almost any combination of unit containers at any desired production-line speed. And along with the new advances come increasingly lower multipacking costs.

81 **Pocket pack that counts**

A two-compartment cellophane pouch package adopted by Anabolic Foods for vitamin tablets offers the built-in consumer convenience of a separate "memory chamber" containing one day's supply.

A second device permits

dispensing the tablets one at a time from the top. The low-cost pack can be adapted by packagers in other product fields.

READ Memo from the Editors: p. 73

This month's Editorial discusses the trend toward coordination of the packaging function in top firms.

82 **A torrent of toothpaste**

Significant to all packagers interested in tube filling or cartoning is Colgate-Palmolive's new high-speed line for toothpaste. Built around a smooth-running rotary-action cartoning machine, the 300-per-minute, straight-line operation includes tandem tube fillers and a bundler that match the cartoner in operating efficiency. Using less manpower, maximum production rate is 66% higher than that on the company's previous lines.

SEE World Report: p. 59

Abstracts from foreign packaging magazines, with helpful ideas you can adapt to your own problems.

84 **See-through card pack**

Cutex demonstrates an intriguing and economical new approach to blister packaging in which vinyl film, pre-applied to a die-cut folder, is stretched around the product to hold and display it from all angles. Reported to effect cost savings of up to 30%.

the technique can be applied to the carding of toiletry and cosmetic items, hardware, toys, jewelry and other products.

86 **Design Histories**

The month's best examples of outstanding redesigned packages, showing how and why they were created.

88 **Pressure-sensitive tape**

A Great Packaging Discovery. In less than three decades, pressure-sensitive tapes have carved out a \$60-million-a-year market for themselves in packaging. Some 240 varieties are now in use, with more on the way. This truly great packaging discovery, which was actually inspired by a national passion for two-tone automobiles, is a tribute to one man's remarkable stick-to-it-iveness. The man is Minnesota Mining's Richard G. Drew, whose persistent research in the face of early failure finally paid off in the development of transparent cellophane tape, now adapted for use in industry and home applications, as well as packaging.

SEE Background for Packaging: p. 39

Notes, quotes and comments on significant news and developments that can affect your business.

90 **Oriented for display**

Companies whose packaging has not kept pace with drug-store merchandising trends can draw a lesson from the stepped-up design and color treatment adopted by Faultless Rubber for a line of rubber sundries. This packager's new self-selection trapezoidal folding boxes incorporate visual appeal, more sell-copy space, product visibility, strong brand and family identity and easy handling. The new one-piece construction with lock tab that permits simple opening and reclosing completely eliminates lost and mixed-up covers.

NOW Question of the Month: p. 106

"How do you get your best packaging ideas?" Two pages of opinions from MODERN PACKAGING readers.

92 **Wine maker turns bottle maker**

Does it pay for a packager to maintain a captive container-manufacturing operation? E. & J. Gallo Winery will find the answer in the 500,000-bottle-a-day pushbutton plant that now feeds a new, special amber-green glass direct to its packaging lines. It is the first completely integrated raw-materials-to-final-package plant in the wine industry. The glass, called Flavor-Guard, is designed to provide protection against flavor-stealing light rays.

96 **Packaging Pageant**

A pictorial kaleidoscope of new packages, revealing significant trends in design and materials.

102 **Quick-change liquid filler**

Flexibility and increased operating speed are harmonized in a new intermediate-speed rotary filler for milk cartons, now in use at Tuscan Dairy. The machine has cut change-over time 65%, increased output 100%. Its unique design should generate good ideas for all packagers of liquids that require extremely accurate volumetric fills and minimum change-over time for containers.

MODERN PACKAGING®

Chairman of the board
Charles A. Breskin
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Alan S. Cole

104 Invisible barrier to oil

If strike-through from oily contents is spoiling the appearance of your packages, you'll be interested in the new fluorochemical sizing that International Harvester is applying to the wrapper and box for its agricultural twines. Result: the products now reach users in clean, bright packages that promote brand identity. The twine can stand indefinitely in these treated packages without wicking its protective oil into the paper.

TECHNICAL & ENGINEERING

111 Heat-sealable polyester films

Wide packaging opportunities have been opened up for a new family of oriented polyester films which offer this plastic's special properties with ease of sealing and bonding on one or both sides. Its strength and resistance to heat and chemicals mean it can be used to package boil-in-the-bag foods, sutures and other items that require radiation sterilization, solvent-based chemicals, oils and cosmetic products. *By Alfred H. Stepan.*

115 Measuring color difference

An automatic color-difference meter is found to be useful for simplified color matching and control of printing inks on collapsible tubes, rapidly indicating changes needed to match a standard. Easy to operate, the meter is suggested for use on other packaging materials. *By David F. Menard.*

118 Questions & Answers

Advice on readers' technical problems given by our Technical and Engineering Editors.

DEPARTMENTS

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A complete run-down on new packaging materials, machinery and services offered by suppliers.

130 Plants & People

News of personnel changes, new plants, expansions and moves by packagers and their suppliers.

146 For Your Information

Notes on association activities and elections, book reviews and a concise calendar of coming events.

152 U. S. Patents Digest

An exclusive digest of all the latest patent grants dealing with packaging materials and machinery.

155 Manufacturers' Literature

To get valuable data free, just indicate the items you want and mail in the handy pre-paid postcard.

176 Index to Advertisers

An alphabetical list of this month's advertisers, to help you find the news in the ads.



MODERN PACKAGING

Executive and Editorial

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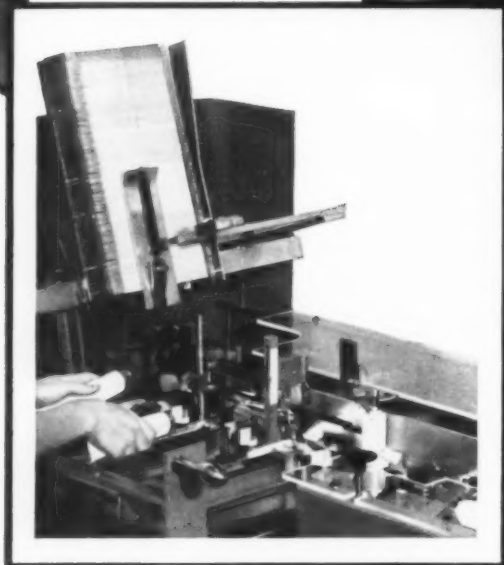
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- one operator can produce 45-60 filled packages per minute—a whole-job operation
- convenient size—30" wide, 70" long, caster mounted—weight 750 lbs.
- base price just \$4,750.00 (plus freight)

REDINGTON **Automax** CYCLE CARTONER

Caster mounting lets you move your Automax easily wherever you need it in your plant to fit in comfortably even where floor space is limited. And it's easy to service, easy to adjust by ordinary plant personnel—it doesn't take a master mechanic to handle the job!

Automax is built with all the engineering skill, attention to details and insistence on top-quality materials which have made REDINGTON equipment world-famous wherever automatic

Just one operator can turn out 40-50-60 packages a minute with this low-budget, whole- job REDINGTON...

Now, just *one* compact, efficient machine—with just *one* operator, will give you 10,000—15,000—18,000 finished packages a day. You waste no plant space, carry no extra investment burden for multiple machine units, to get the production boost and the cost cuts made possible by REDINGTON's *entirely new* Automax Cycle Cartoner.

For a main product, supplementary items, special sizes, introductory and sample packages, fill-in runs—if you package in reverse tuck folding cartons, Automax does the *whole packaging job*.

Remember, with only one operator you'll be getting a volume it takes two, three or more to produce manually. In plants where this new REDINGTON is already in daily production, it is turning out a steady 40 to 50 packages a minute, all day long.

MANY PROFITABLE CARTONING JOBS FOR **automax**

Packagers like these are already getting the benefit of Automax production:

DRUGS, PHARMACEUTICALS, TOILETRIES

Bristol-Myers Co. of Canada Ltd.
Valentine Laboratories, Inc.
Burroughs Wellcome & Co.
Chase Chemical Co.
Thomas Leeming Co.
Allen B. Wrisley Co.
Nutralite Products, Inc.
Eli Lilly & Co.

HARDWARE & PARTS

Chicago Rawhide Mfg. Co.
Eaton Mfg. Co.

FOOD PRODUCTS

The Quaker Oats Co.
Fred Fear & Co.

WAX SPECIALTIES

W & F Manufacturing Co.

automax COMBINES SIMPLE DESIGN WITH HIGH EFFICIENCY

Any girl can learn how to operate an Automax in far less time than it takes to train workers for manual packaging. In addition to keeping the carton magazine filled, she performs just two actions: she places an item to be cartoned in each of three loading troughs in front of her—then pushes the slide forward and back.

Automax does all the rest automatically—feeds and forms cartons, places them in the carton conveyor pockets, tucks in the end flaps after the items are inserted, discharges the finished packages, restarts the cycle.

packaging is performed. That means you're sure of long, trouble-free service.

You can have an Automax installed and turning out steady production for less than \$5,000! Compare this with what you pay one employee annually—not to mention overhead on that expense. And remember, no supplementary machine investment is required—you get *whole-job cartoning* with the single efficient Automax unit!

★ WRITE—NOW—FOR COMPLETE DETAILS...

An illustrated folder tells the whole story of the new Automax—specifications, method of operation, capacity, etc. Send for your copy today!

F. B. REDINGTON CO.

3010 ST. CHARLES ROAD, BELLWOOD, ILLINOIS
Chicago Phone: AUstin 7-4200
Verona, New Jersey: CEnter 9-4608



PACKAGES FOR PERFORMANCE

DOBECKMUN design and printing skills have set the standards for the flexible packaging industry for more than thirty years. In printing by processed gravure, for example, Dobeckmun achieves quality of detail and definition on both films and foils that are the picture of perfection. The combination of truly creative package design and unmatched printing, backed by proven records of performance, can be yours to promote and attract new customers to your product. For a demonstration of sales-winning ideas that will perform for you in the market place, call the Dobeckmun representative nearest you.

Dobeckmun printing helps win shelf space and customer demand for Sunniland Nuts. Sunniland sells the whole product story, in words and pictures, visually and readably portrayed in Dobeckmun processed gravure.



DOBECKMUN



DOBECKMUN's processed gravure printing speeds up turn-over for foods, textiles, paper products and thousands of other items marketed in Dobeckmun films and foils. ● Arresting design, faithful reproduction and flawless registration, in all printing processes, are part and parcel of packages for performance by Dobeckmun.

The Dobeckmun Company, A Division of The Dow Chemical Company, Cleveland 1, Ohio • Berkeley 10, California. Offices in most principal cities.

To the Readers of Modern Packaging

The House of Harley—creators, designers and manufacturers of the world's most beautiful folding boxes, wraps and labels to Abbott Laboratories, James B. Beam Distilling, Elizabeth Arden, Lanvin Parfums, Revlon and more—are pleased to announce our services to the readers of MODERN PACKAGING.

From the inauguration of United States operations in New York City in June, 1948, we have grown extensively, with agents and representatives now in Chicago, Montreal, Paris, Brussels and Milan.

We began our services as designers of packaging for the perfume and cosmetic industries, introducing for the most part, novelty items, unusual shapes and glitter applications. These were on folding board, and designed for fast assembly and mass production.

Our unusual approach, our European training and our knowledge of the American market soon enabled us to create fresh, new packaging ideas, and these ideas won acceptance from our customers right from the start.

In time, because of the intricacies of our shapes and constructions, we were asked to broaden our services of creation and design so as to include full responsibility for the packages under order. This we did. It produced more money for us—and not a few gray hairs—but our customers were pleased since they were able to obtain the exact replicas of samples submitted.

Demand for new shapes, new constructions, new gimmicks and novelties grew bigger and bigger with the years. And with the help of most flattering articles in trade papers, magazines and newspapers our reputation grew to world-wide proportions.

At this point we organized to produce our ideas in foreign countries—and also to adapt our services to the pharmaceutical industry and to hosiery packaging. But our main effort remained in the luxury perfume and toiletries fields.

By 1955 and 1956, however, we began shifting our emphasis. We started giving less attention to the novel-



1959 presentation by
Harley of Beam's pin bottle package

ties and constructions that had put us into business, and more attention to beauty in design and printing—since our aim was now to create and manufacture the world's most beautiful folding cartons, wraps and labels. We wanted to produce for our customers the most exciting foil printing, bronzing and embossing they had ever laid their eyes on.

To achieve this goal, we established last year what we call the first Printing Workshop for Packaging—a craftsman's paradise—complete with the best machinery we could find.

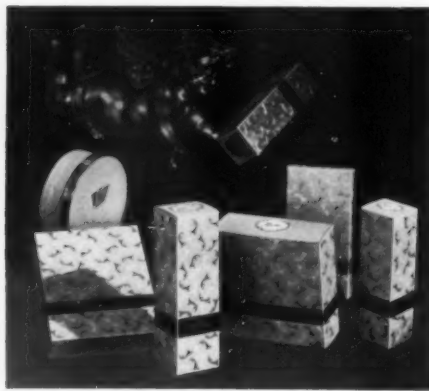
Today our creative art, engineering, printing and manufacturing facilities are geared to a multi-million-dollar operation. We have expanded our services to include the liquor and pharmaceutical industries, and we are ready to serve all other industries that may require our facilities.

Samples of our work are freely available. And our sales staff is at the complete disposal of MODERN PACKAGING readers who wish detailed information and estimates. May we invite your inquiries.

The House of Harley, Inc., 15 East 40th Street, New York, N.Y. Telephone: MUrray Hill 6-2984. Cable address: Harleyart, New York.



Harley's ellipse-style box adapted to a cosmetic line



A presentation of Revlon's Intimate line, manufactured by Harley



This trade mark is our signature. Look for it on the bottom flap of the world's most beautiful boxes.



... you are looking at the only lug cap
that gives you a **LIVE RUBBER SEAL**

Crown pioneered the development of the quarter-turn lug cap. And only CROWN offers you the positive protection of a *live rubber seal*. Live rubber will *reseal* again and again. There is *no deterioration* or "setting"—elasticity assures *conformance* even to rough jar lips. Live rubber is the *best* material for withstanding live steam and pasteurization temperatures.

CROWN lug caps are designed for maximum mechanical efficiency as well as the fashion flair.

Deeper sides give added strength and ease of handling. Choice of plain or knurled sides offers you maximum flexibility for all product lines. Crown's exclusive, *flat-seating lug* threads give positive, non-loosening seal—with or without vacuum pack.

For lug caps to fit all your requirements—no matter how exacting... for C.T. caps with the broadest selection of liners ever offered... let Crown serve you.

for cans • closures • crowns • machinery

CROWN

CROWN CORK & SEAL COMPANY, INC.
9300 Ashton Road, Philadelphia 36, Pa.

Royal has a reason...

Really good pudding and pie filling is hypersensitive to moisture. To get the very best protective package for famous Royal Puddings ...and at moderate cost...Standard Brands selected a special Riegel laminated glassine. Result: Absolute assurance that delicately flavored contents and moisture-bearing air will not meet.

Extra benefits can be yours, too. "Protected by Riegel" means positive protection all the way...*plus* flexible packaging materials that are:

- ...tailored to run at high speeds on automatic machines
- ...made to your own specifications; printed, waxed, coated and laminated combinations of all types
- ...priced to give the best possible protection at the lowest unit cost.

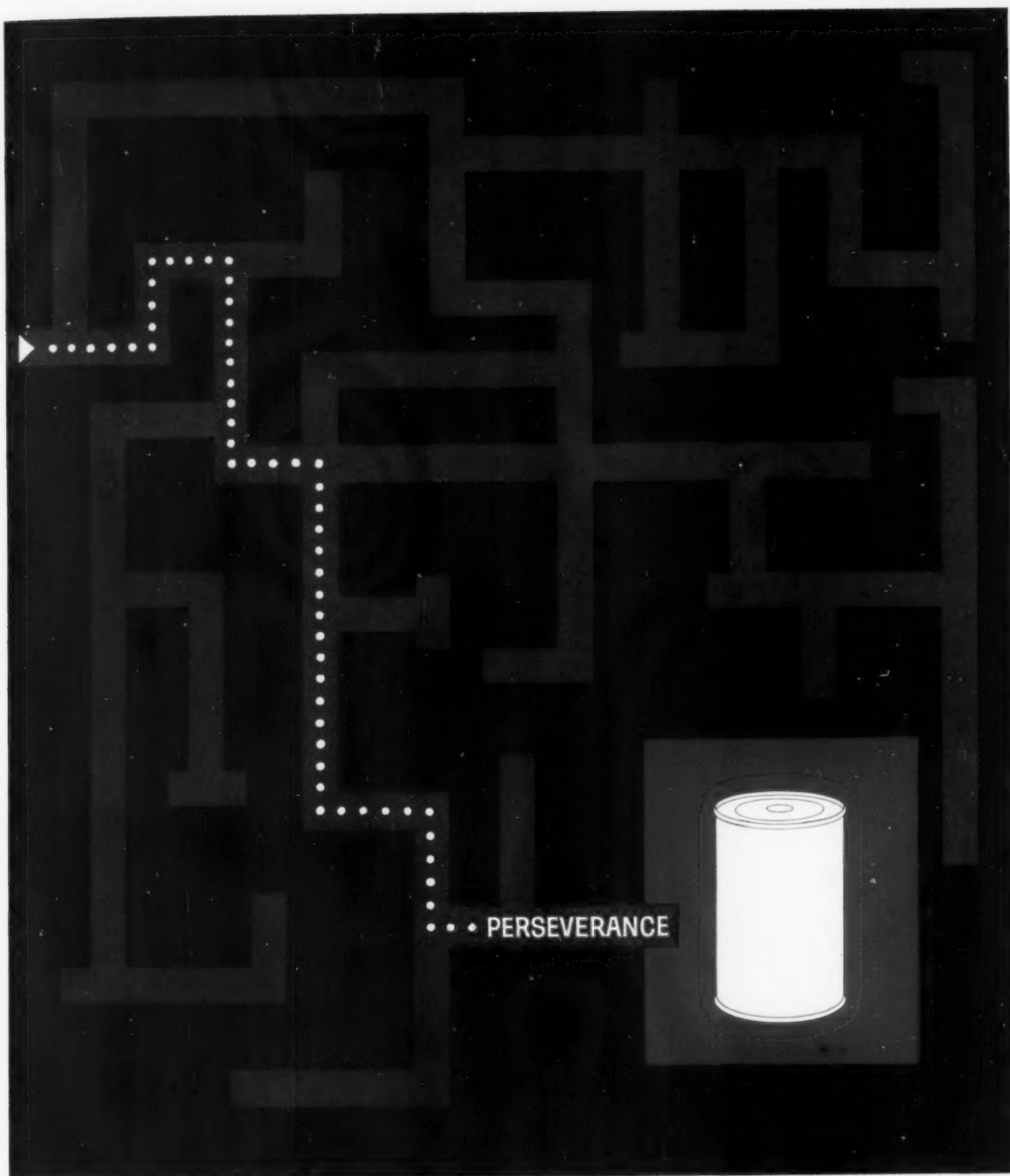
Hundreds of today's best-sellers benefit from Riegel's uniformly effective product protection. You can, too. Write Riegel Paper Corporation, 260 Madison Avenue, New York 16, N. Y.

Riegel PROTECTIVE PACKAGING MATERIALS

Royal Chocolate Pudding is protected by one of over 600 Riegel tailor-made papers, a special laminated glassine made to run at high speed on Pneumatic Scale equipment.

*TM

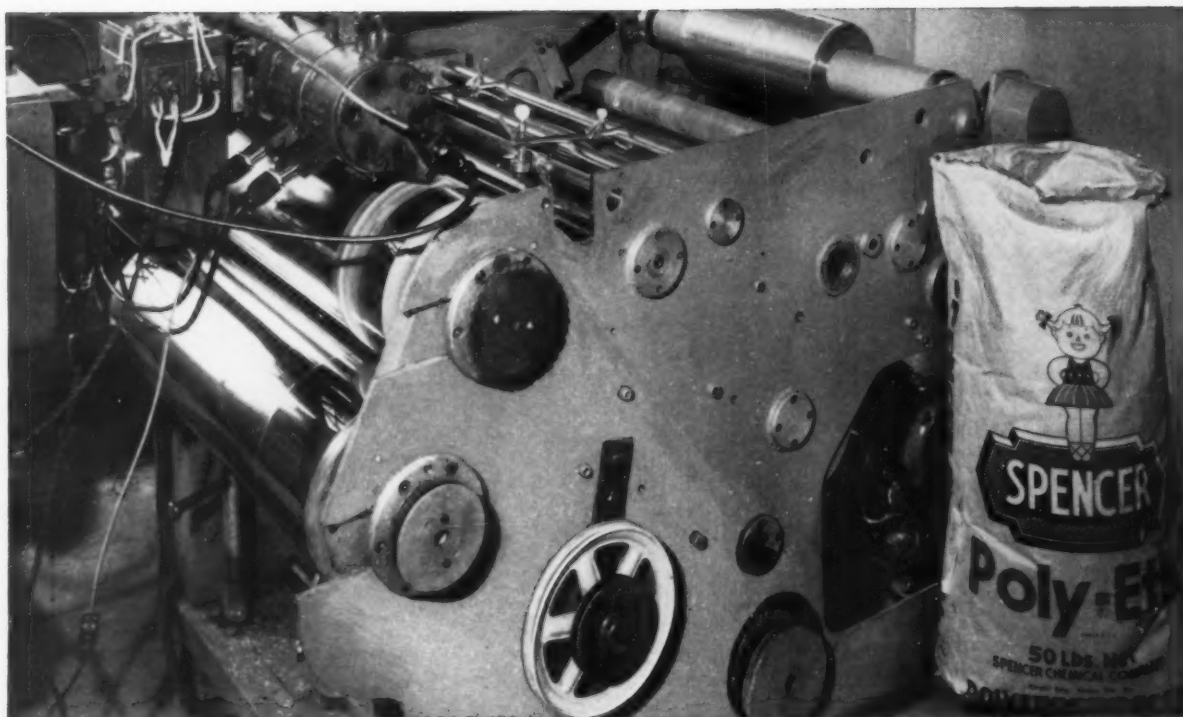




Canco's perseverance has been rewarded with most of the major advances in packaging technology. This determination to find the *right* way has helped us solve countless special problems for our customers. That's why Canco has a reputation for alert, imaginative, cooperative service—the kind that can help make your operation *more efficient, more profitable*. The Canco salesman will be glad to tell you more. Give him a call today!



NEW YORK
CHICAGO
NEW ORLEANS
SAN FRANCISCO



Here is the fastest growing way to extrude polyethylene film: the chill roll, or casting method. The machine

above is typical of those used by extruders for producing this clear, sparkling packaging film.

Today's packaging trend is to . . . Chill Roll Flat Film For Greater Clarity and Gloss

. . . and Spencer "Poly-Eth" now offers
three special polyethylene resins
designed for this extrusion method

More and more packagers are demanding polyethylene film extruded by the chill roll method. And for good reason: this film has exceptional clarity and gloss. In fact, many users report it has more sparkle and eye-appeal than film produced by any other method.

Rates of production by the chill roll method *today* are comparable to flat film extrusion with the water bath method of cooling and to the blown film method. The chill roll method, however, is potentially *faster* than either method.

To meet the need for this film, Spencer Chemical Company has perfected three "Poly-Eth" Polyethylene resins designed especially for chill roll extrusion of flat film:

(1) "Poly-Eth" 2455 for high clarity (density: .925).

(2) "Poly-Eth" 2255 for high impact (density: .917).

(3) "Poly-Eth" 2504 for stiffness and clarity—ideal for overwrap film (density: .935).

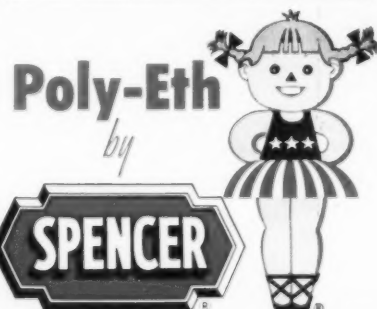
Miles of film have already been produced from these resins by extruders throughout the country. This film has been extruded down to 1 mil, and even thinner gauges are possible.

For more information about these resins, or for names of suppliers of film made from Spencer resins, contact Spencer Chemical. And, be sure to visit the Spencer booth (#875) at the Packaging Show.

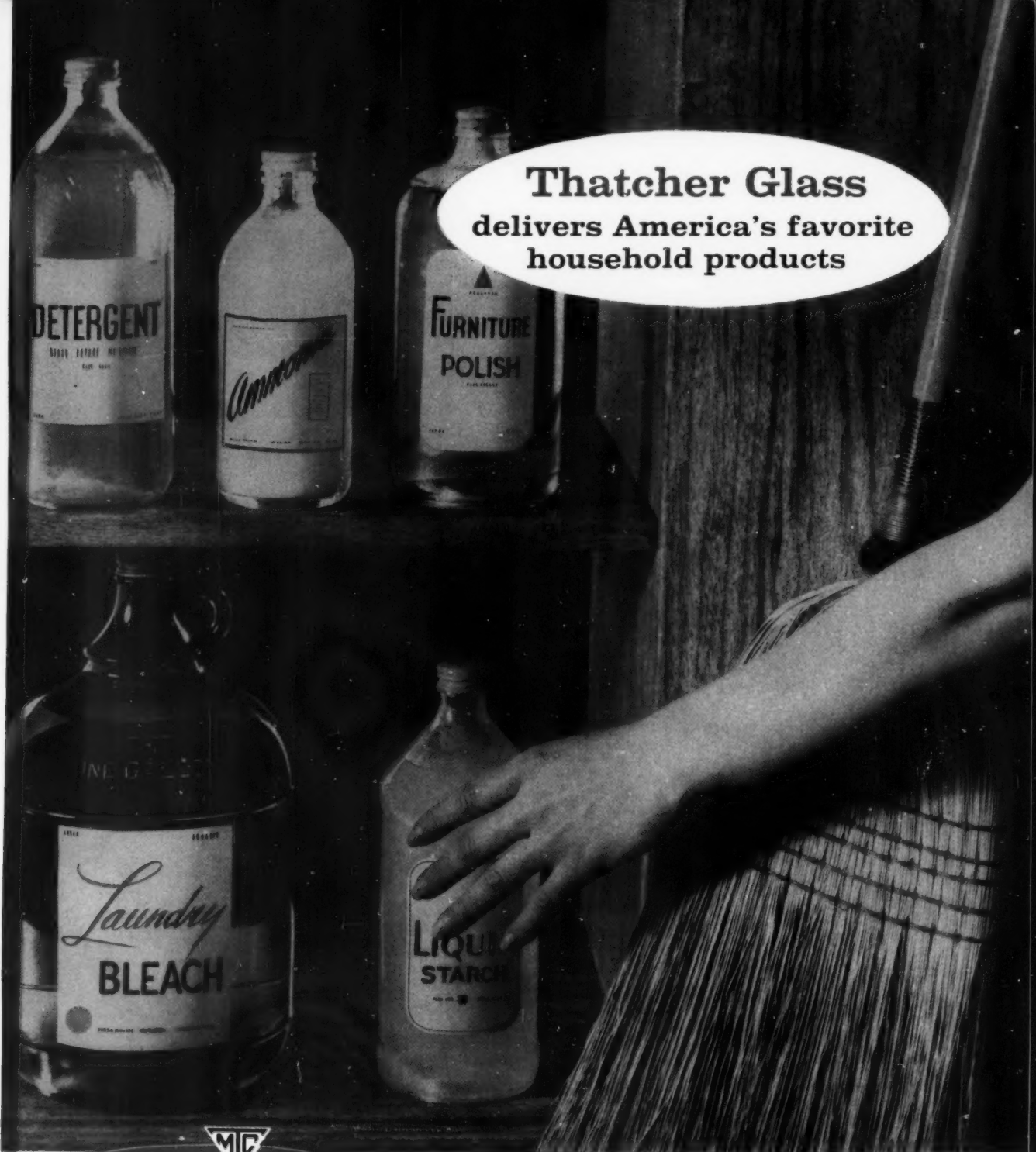
Typical processing conditions
for running flat film:

EXTRUDER

Front	500° F.
Rear	450° F.
Die	500° F.
Stock Temperature	475° F.
1st Chill Roll	140° F.
2nd Chill Roll	80° F.



SPENCER CHEMICAL COMPANY
Dwight Bldg., Kansas City 5, Mo.



Thatcher Glass
delivers America's favorite
household products

Thatcher Glass

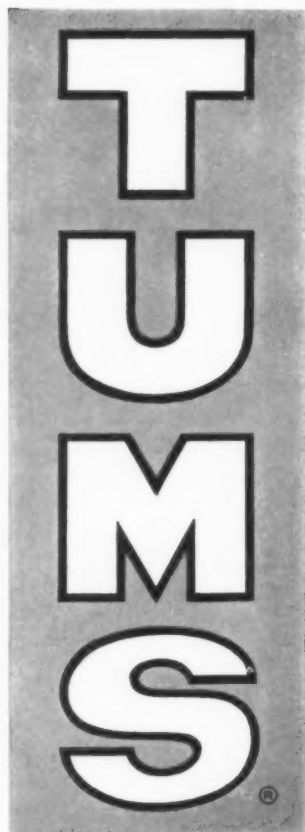
Package your household products in glass and you've taken the most important step toward creating satisfied customers. Because glass is chemically inert, your product retains its full strength and quality from the time the bottle is filled until the last drop has been used. Thus Thatcher provides the kind of shopper assurance that means repeat sales—greater profits. Your Thatcher representative has some enlightening facts on the advantages of packaging in glass. He is ready to discuss stock or private mold containers, and can offer merchandising ideas, suggestions and recommendations on packages that sell.

THATCHER GLASS MANUFACTURING COMPANY, INC., NEW YORK, N. Y.

FACTORIES: Elmira, N. Y., Jeannette, Pa., Streator, Ill., Lawrenceburg, Ind., Saugus, Calif.

SALES OFFICES: Elmira, N. Y., Boston, Hartford, New York, Philadelphia, Detroit, Chicago, Minneapolis, Louisville, Los Angeles, San Francisco, St. Louis

Multi-item merchandising and "Billboard" Display for **TUMS**



with its new "Carrier-Pack" of

REYNOLDS WRAP ALUMINUM PACKAGING

The Lewis-Howe Co., St. Louis, has long used Reynolds Wrap Aluminum Packaging as an intimate wrap, to give maximum protection to the individual rolls of TUMS. Now a new aluminum foil folding carton gives TUMS a unique multi-pack that makes something *big*, literally, out of an item essentially small in size.

Big, first, is the brand name display given to the short word TUMS on this carton. It's a "billboard" effect in gleaming metallic blue outlined with silver . . . sure to catch the impulse buyer's eye on counters everywhere. And *big*, too, is the sparkling red-letter display of TUMS' sensational offer. This is multi-item merchandising with dramatic eye-appeal and extra protection. And many types of products can get these advantages with Reynolds Aluminum Foil folding cartons.

Make this step-to-the-top for *your* product. Let us introduce you to the New Economics of Reynolds Wrap Aluminum Packaging . . . show you how low is its relative cost compared to other marketing factors, and how big the return on investment. Get the details, too, on Reynolds important new consumer study: "The Image of Aluminum Foil." Call any Reynolds sales office or write Reynolds Metals Company, Richmond 18, Va.

BRAND POWER PLUS . . . FOR FAMOUS TUMS!

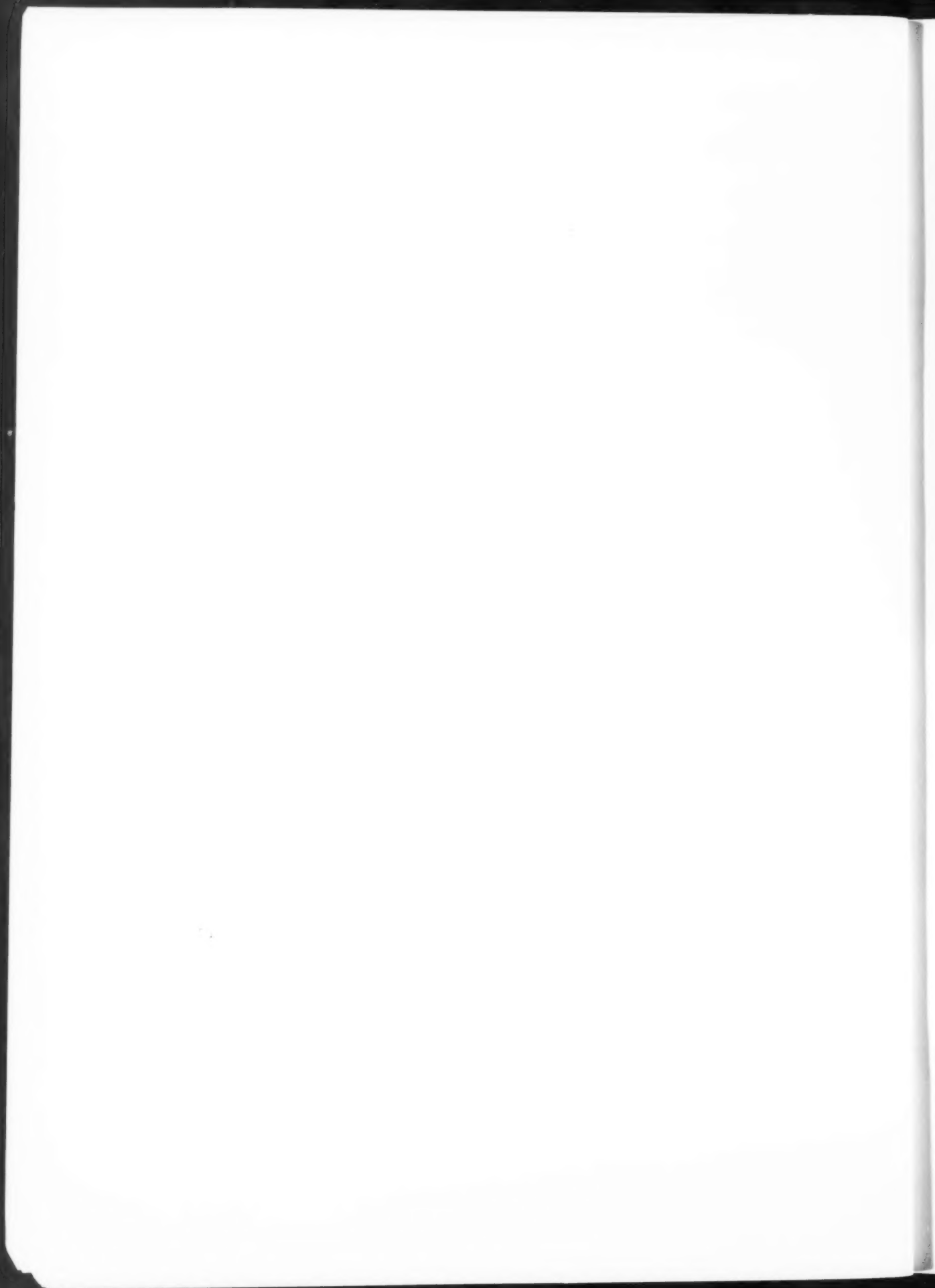
Like more and more products, TUMS adds to the sales power of its brand name by using this Packaging Seal on its new carton. Surveys show 8 out of 10 women know the Seal, 7 out of 10 of these prefer products carrying it!



REYNOLDS ALUMINUM

Watch Reynolds New TV Shows "Walt Disney Presents" and "All Star Golf" Every Week on ABC-TV.





*Victoria Vogue
selects*



Acetate Sheeting...

By **Joseph Davis Plastics Co.** for attractively packaging their line of powder puffs. JODA crystal clear acetate sheeting meets the requirements of the highly specialized job of displaying—and protecting—cosmetic products. With its smart appearance, sparkling transparency and rigidity for the utmost protection, it shows the product at its best. It will stay that way, for JODA acetate has long-wearing characteristics that withstand adverse shipping, storage and display conditions.

JODA extruded acetate sheets, rolls and films in all gauges—transparent, translucent or opaque—are excellent for VACUUM FORMING as well as for fabricating square and round containers. Smart merchandisers know that "seeing it is half of selling it" Find out how your product can be best seen—and sold—with packaging made from JODA acetate. Write for information and samples.



JOSEPH DAVIS PLASTICS CO.

430 Schuyler Ave.
Kearny, N. J.

Phone
WYman 1-0980
N. Y. BArlay 7-6421

your product belongs



in glass
by
Brockway

Does your prescription have the professional look and the clean, ethical appearance that is so important in building prestige and good will for your prescription department? • Prescription ware by Brockway is the answer. There's a type and size glass container of unsurpassed quality for every requirement in the packaging of prescriptions . . . a complete line of prescription ware that is outstanding in ethical appearance and designed to provide the utmost in handling convenience for the pharmacist. • A product that is worthy of consumer acceptance deserves a quality glass container by Brockway.



BROCKWAY GLASS

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Sole Offices in Principal Cities

*REG. U. S. PAT. OFF. AND FOREIGN COUNTRIES



*B.V.D. CAPTURES THE E.Y.E.

BRAND



PACKAGE BY CELLU-CRAFT PRODUCTS CORPORATION

Designers, Color Printers and Converters of Flexible Packaging Materials

General Offices & Plant: 1401 4th AVE., NEW HYDE PARK, N. Y., PRIMPROSE 5-8000 *Sales Offices in principal cities*
PRINTED CELLOPHANE • POLYETHYLENE • PLIOFILM • FOIL • ACETATE • GLASSINE • In ROLLS • SHEETS • BAGS • POUCHES • ENVELOPES

The story behind a cap that is setting a new standard for the industry



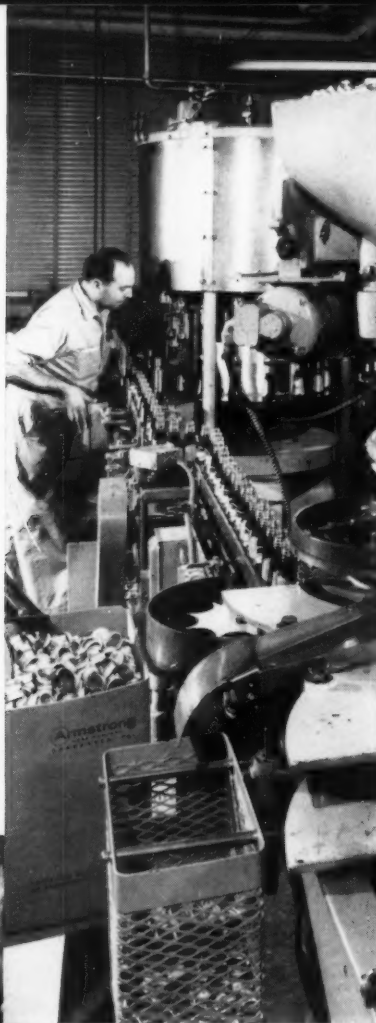
In 1956, a group of Armstrong men met to consider a wide variety of ways in which metal caps could be demonstrably improved.



To do the job they required, tools had to be designed and built in the company's own shops. For no such tools were then in existence.



At the Armstrong Research and Development Center, cap requirements were studied, and detailed specifications were carefully drawn up.



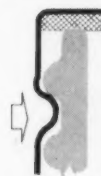
After months of testing, the tools were approved, and production caps were ready to be turned out. The finished caps offered these significant improvements:



1. Tightly rolled, kink-free bead that helps prevent rusting and bending of the cap.



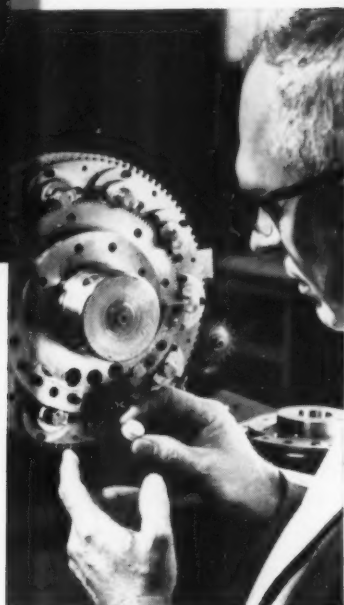
2. Fine knurl formed by stretching metal both in and out keeps paint and coatings from chipping.



3. Smooth, deep thread seats firmly even on glass finishes at minimum tolerance.



4. Smooth, gentle fade-out doesn't pinch starting thread, assures easy starting on high-speed lines.



The Engineering Department then designed the precision tools, and the Manufacturing Division transformed the plans into smoothly performing, automatic equipment.

In addition to these mechanical improvements, Armstrong Metal Caps have two other important advantages: their coatings . . . and their liners. Coatings are always applied over a size coat to assure firm bonding to the plate. Lining materials for hundreds of products of all types are tested or developed each year by the Armstrong Research and Development Center.

Our invitation to you: try these completely new caps on your lines. See for yourself the new standard of performance they have established.

Armstrong PACKAGING

GLASS CONTAINERS • CEL-O-SEAL® BANDS (*® E. I. DU PONT DE NEMOURS & CO., INC.)
METAL CAPS • MOLDED CAPS • EMBOSSED-TOP CORKS • PACKAGE DESIGN

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

No. 90 Brilliantly Glossy

No. 90 Prints Well By Any Process

No. 90 Distinctively Beautiful

No. 90 Folds and Embosses Perfectly

No. 90 Ultragloss... Glazed Finish Boxboard

No. 90 White and Chromatic Colors

No. 90 Enhances Multi-Color Designs

No. 90 Carton and Lighter Weights

No. 90 Less Expensive Than You'd Think

Ridgelo
CLAY COATED
REG. U.S. PAT. OFF.
PRODUCTS

LOWE PAPER COMPANY

Ridgefield, N. J.

An Independent Mill—Serving Industry Since 1906

Representatives • Detroit—Joseph P. Giroux • Los Angeles—Norman A. Buist • Philadelphia—Philip Rudolph & Son, Inc. • St. Louis—A. E. Kellogg

CLARK CONTAINERS SELL ON SIGHT. They never stand idle...instead demonstrate an obvious knack for getting off the shelves and into shopping carts, purses, packages. Why? Because J. L. Clark's Art Department is well versed in merchandising know-how and sales psychology as well as artistic talent. The result: colorful lithographed containers, designed to sell on sight.



Colorful booklet "A Businessman's Guide to Container Design" gives basic facts on how containers are designed to sell on sight. Send for a copy today.

lithographed metal containers

J. L. CLARK

J. L. Clark Manufacturing Co., Rockford, Ill.;
Liberty Division Plant and Sales, Lancaster, Pa.;
New York Sales Office, Chrysler Bldg., New York 17



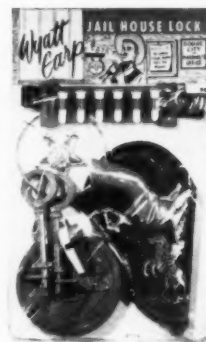
Seal polyethylene bags this fast, low-cost way



Ring-type Bostitch staple
securely seals this package.



Seal small accessories and
fasten them securely
to card holding product.



Attach paper or cardboard
headers as you seal bags.

Shown are three approaches to closing polyethylene and other film-type bags. The closure method—Bostitch stapling—is the same in all three.

The reasons for choosing Bostitch stapling over all other methods are simple. Stapling is faster. It costs less—both for materials and labor. What's more, stapling provides a secure, pilfer-proof closure. It's adaptable to a wide range of sizes and shapes of bags and their contents. The seal is neater and doesn't interfere with printed sales messages.

There's a Bostitch combination of stapler and staple to speed your polyethylene sealing. A Bostitch Economy Man—one of 350 working out of 123 U. S. and Canadian cities—will show what you can save.

Look up "Bostitch" in your phone directory, or write to Bostitch, 483 Briggs Drive, East Greenwich, Rhode Island.

Fasten it better and faster with



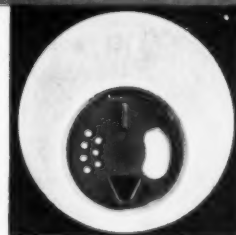


Beauty + UTILITY = AN IDEAL SALT CONTAINER

Here is a sparkling development in container design that *sells* and *serves* . . . as surely as its contents improve the flavor of foods. The soft glow of an aluminum foil label attracts the attention of millions of homemakers across the nation. In the home . . . and outdoors, too . . . women are delighted with the easy-to-grip shape and 12-ounce weight. This is another example how CLEVELAND CONTAINERS . . . artfully engineered . . . create the ultimate in product packaging. May we develop a container to enhance your product?

THE ALL-NEW PLASTIC CLOSURES ARE "TOPS" IN BEAUTY AND FUNCTIONAL DESIGN.

Available in colors, they can be made to harmonize or contrast with the labels. So kind to the fingers, these closures smoothly snap and lock in position! They feature openings of sift, pour AND the new precision spout.



Write for
our latest Brochure
on Packaging.

PLANTS & THE
SALES OFFICES:

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CO.**

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DETROIT
CHICAGO
MEMPHIS
LOS ANGELES
PLYMOUTH, WIS.
JAMESBURG, N. J.
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ALL-FIBRE CANS COMBINATION METAL AND PAPER CANS
SPIRALLY WOUND TUBES AND CORES FOR ALL PURPOSES.

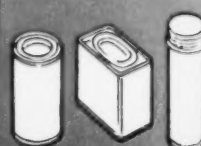
CLEVELAND CONTAINER CANADA, LTD.

Plants and Sales Offices: TORONTO AND PRESCOTT, ONT. Sales Office: MONTREAL

SALES
OFFICES:

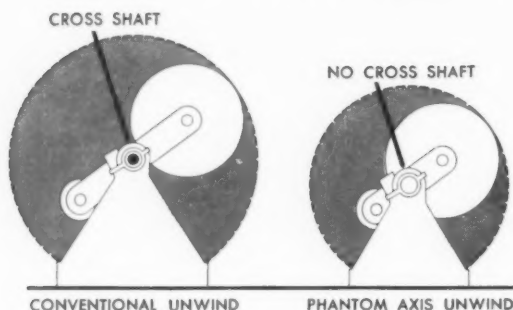
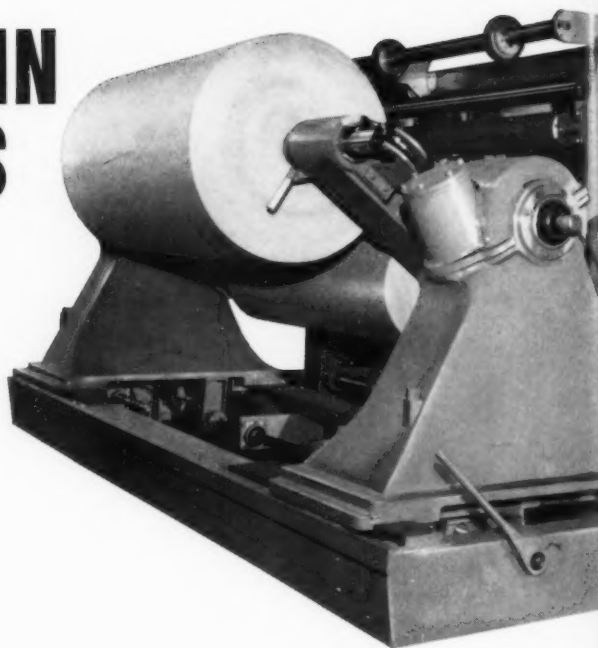
NEW YORK CITY
WASHINGTON, D. C.
ROCHESTER, N. Y.
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CONN.
• ABRASIVE
DIVISION
AT
CLEVELAND

Why pay more?
For quality products
...call CLEVELAND!



ANNOUNCING... A NEW ADVANCE IN TURRET UNWINDS

EGAN PHANTOM AXIS* TURRET UNWINDS



***ELIMINATION OF CENTER CROSS SHAFT MAKES THE DIFFERENCE—
GREATER ROLL DIAMETERS, MORE COMPACT DESIGN, FAR LESS
HEIGHT AND FLOOR SPACE**

FEATURES

Pneumatic constant tension system
(optional)

Compact design means more rigidity;
better operation at high speeds

Speeds in excess of 1000 fpm

Flying splices at full machine speed

Provision for splicing with either inside
or outside of web up (optional)

Knife cut-off

Power rotation of turret

Automatic or manual side shifting

Air chucking of cores or shafts (optional)

Web widths through 120"

Write, or phone Randolph 2-0200, for illustrated technical data giving complete information on the new Phantom Axis Turret Unwind Series, and its companion unit, The Egan Phantom Axis Turret Winder.



FRANK W. EGAN & COMPANY
SOMERVILLE, NEW JERSEY

CABLE ADDRESS: EGANCO—SOMERVILLE (NJER)

MANUFACTURERS OF PAPER CONVERTING MACHINERY: COATERS, LAMINATORS, TREATERS, GUMMERS, SATURATORS, EMBOSSERS, UNWINDS, WINDERS, DRYING SYSTEMS, AND OTHER COMPONENTS.

REPRESENTATIVES: MEXICO, D.F.—M.H. GOTTFRIED, AVENIDA 16 DE SEPTIEMBRE; JAPAN—CHUGAI BOYEKI CO., TOKYO. LICENSEES: GREAT BRITAIN—BONE BROS. LTD., WEMBLEY, MIDDLESEX; FRANCE—ACHARD-PICARD, REMY & CIE, 36 RUE D'ENGHIEN X, PARIS; ITALY—EMANUEL & ING. LEO CAMPAGNANO, VIA BORROMEI 1 B/7, MILANO; GERMANY—ER-WE-PA, ERKRATH, BEI DUSSELDORF.

Q

: And what else do you associate with STAN-PAK?

Certainly...



CE—
LESS

ional)

tech-
new
ation

NY
SEY
E (NJER)

MMERS,
NENTS.

EMBLEY,
RMANH—

ING



Q: And what else?

Certainly...

FILM PACKAGING

STAN-PAK™ offers you single-source convenience. Film, foil, paper and board. Laminations. Sheet and roll stock. Bags, pouches, boxes, sleeves. Labels. Lining materials. Inner and outer wraps. Vacuum and controlled atmosphere packaging. Special purpose containers. Nineteen mills and manufacturing plants. Sales offices throughout the United States.

Q

And what el



Certainly...

FILM PACKAGING

One of the many areas in which STAN-PAK can help you get packaging mileage. Now one of the country's largest integrated packaging manufacturers, Standard Packaging offers you a comprehensive service, national in scope. Capacity... both manufacturing and creative. Representatives who know their business... and regard it as a privilege to study yours. STAN-PAK: a good company to know, and depend upon.



STANDARD PACKAGING Corporation
America's fastest growing
packaging source

Executive offices:
200 East 42nd Street,
New York 17, N. Y.

Subsidiaries:

Fonda Container Co., Inc.
St. Albans, Vt.
Standard Cap & Seal (Canada) Ltd.
Burlington, Ontario, Canada

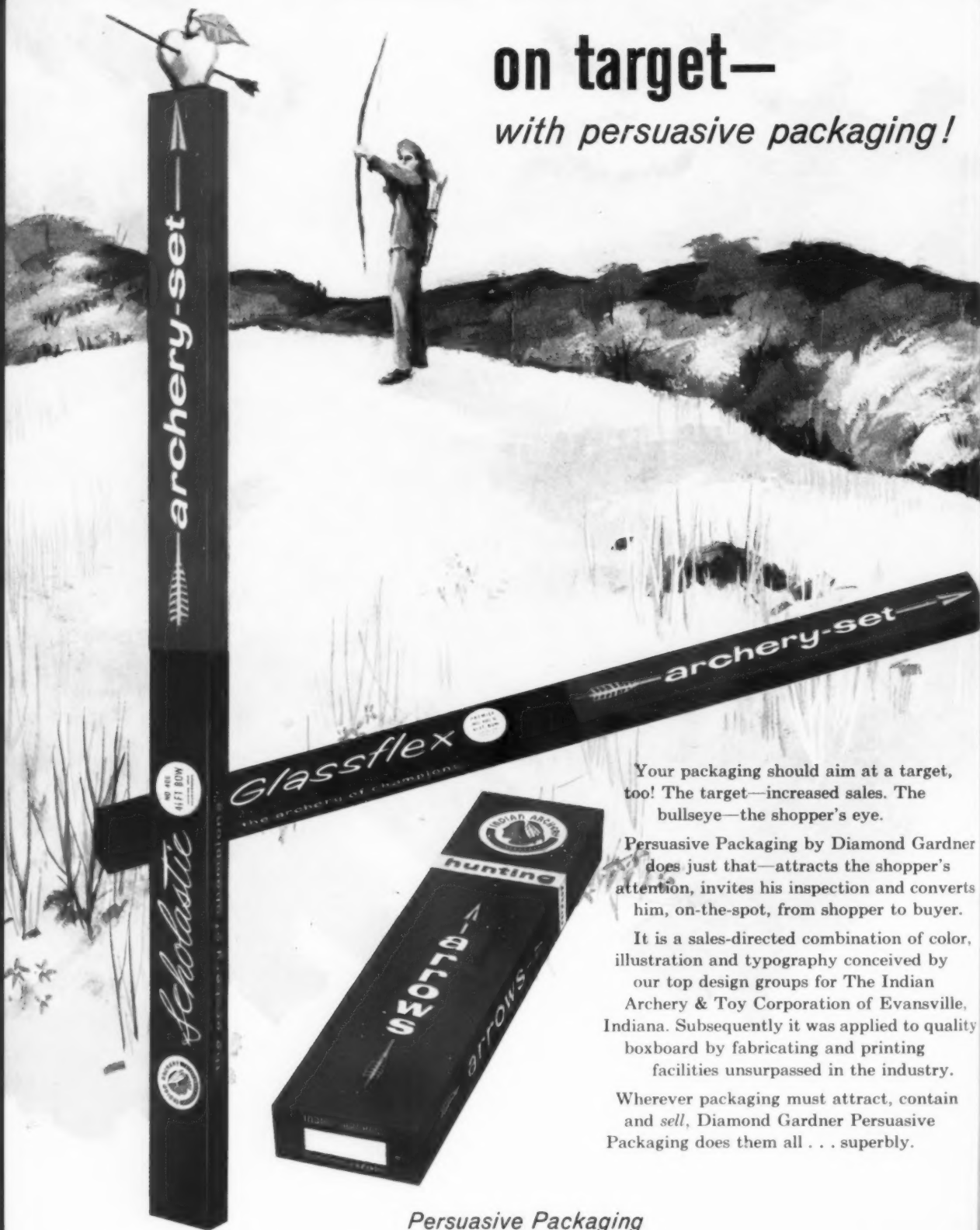
Divisions:

Allegheny Label Division
Cheswick, Pa.
Bradley-Gilbert Folding Box Division
Louisville, Ky.
Chemical Fine Paper and Board Division
Holyoke, Mass.
Closure Division
Chicago, Ill.
Eastern Fine Paper and Pulp Division
Bangor, Me.

Flexible Packaging Division
Clifton, N. J.
Fuller Label & Box Division
Pittsburgh, Pa.
Gebhart Folding Box Division
Dayton, Ohio
General Felt Products Division
Brooklyn, N. Y.
Johnston Foil Division
St. Louis, Mo.
Missisquoi Division
Sheldon Springs, Vt.
Modern Packages Division
Los Angeles, Calif.
National Metallizing Division
Trenton, N. J.
Royal Lace Paper Division
Brooklyn, N. Y.

on target—

with persuasive packaging!



Your packaging should aim at a target, too! The target—increased sales. The bullseye—the shopper's eye.

Persuasive Packaging by Diamond Gardner does just that—attracts the shopper's attention, invites his inspection and converts him, on-the-spot, from shopper to buyer.

It is a sales-directed combination of color, illustration and typography conceived by our top design groups for The Indian Archery & Toy Corporation of Evansville, Indiana. Subsequently it was applied to quality boxboard by fabricating and printing facilities unsurpassed in the industry.

Wherever packaging must attract, contain and sell, Diamond Gardner Persuasive Packaging does them all . . . superbly.

Persuasive Packaging

DIAMOND GARDNER CORPORATION

THE GARDNER DIVISION • MIDDLETOWN, OHIO

Manufacturing Plants in MIDDLETOWN and
LOCKLAND, OHIO, and SPRINGFIELD, MASS.

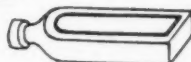
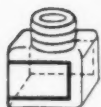
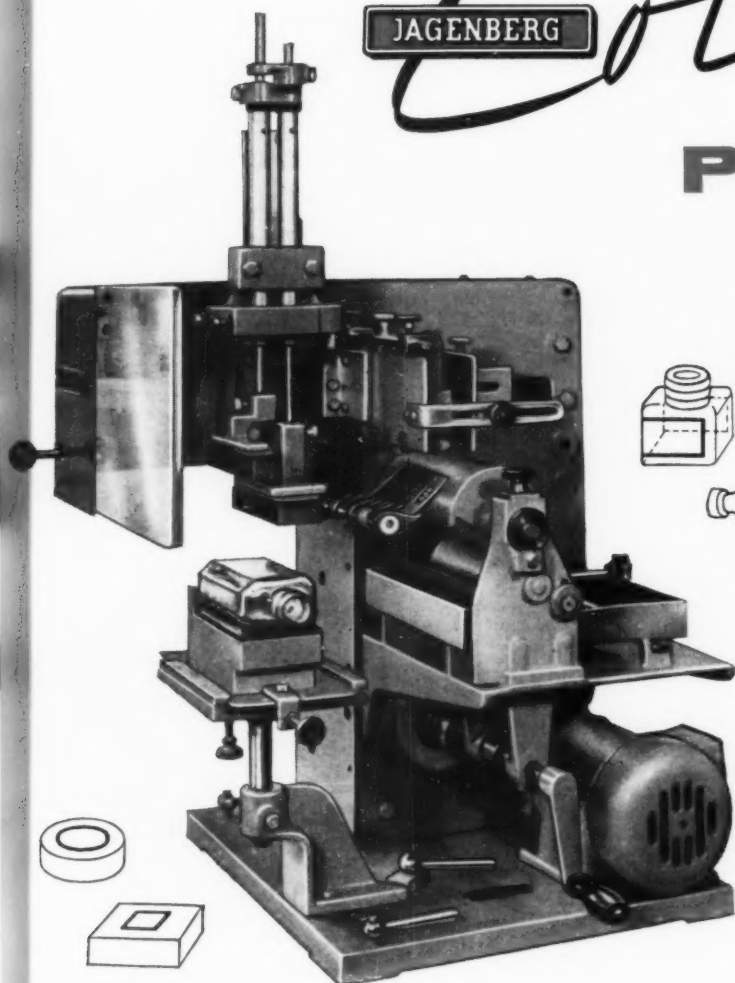


DRY CARTONS • CARRIERS • BOXBOARD IS
PARAFFIN CARTONS • RETAIL CARTONS

JAGENBERG

Colletta

PORTABLE BENCH LABELER



Highly Versatile

Fast Changeovers

Blister-free Application

Precision Built

The Colletta bench-type labeling unit is the ideal solution to short run labeling problems.

Basically a semi-automatic, hand-fed unit, it is readily converted to an automatic machine by use of auxiliary attachments providing fully mechanized intake and discharge of objects being labeled. Labels are applied with full-surface glue adhesion to a range of shapes in bottles, jars, boxes, books, etc. up to diameter or height of 5½". Size changes are made within a maximum of five minutes.

Designed and manufactured by Jagenberg of Dusseldorf, this Universal Labeler is now sold exclusively in

the United States by Pneumatic. Write for Bulletin 138 which provides detailed information. Better still, send in samples of objects presenting production labeling problems at your plant. A prompt analysis and quotation will be submitted.

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Massachusetts. In NEW YORK, 117 Liberty Street; CHICAGO, 360 No. Michigan Avenue; DALLAS, 318 No. Pearl Street; ROCHESTER, 662 Monroe Avenue. Also: FRED TODT CO., 2021 South Hill Street, Los Angeles; 1485 Bayshore Blvd., San Francisco; 105 Orcas Street, Seattle.



Packaging and Bottling Equipment

you
profit more
with
METEOR



METEOR is the ink with more to offer
on every run—more mileage—more economy—
more satisfaction—and more re-orders.

You can start today to profit more—
phone S&V for METEOR.



- sets and dries quickly • odor free • scuff proof • won't skin
- eliminates offsetting • excellent opacity • minimum penetration

Sinclair and Valentine Co.

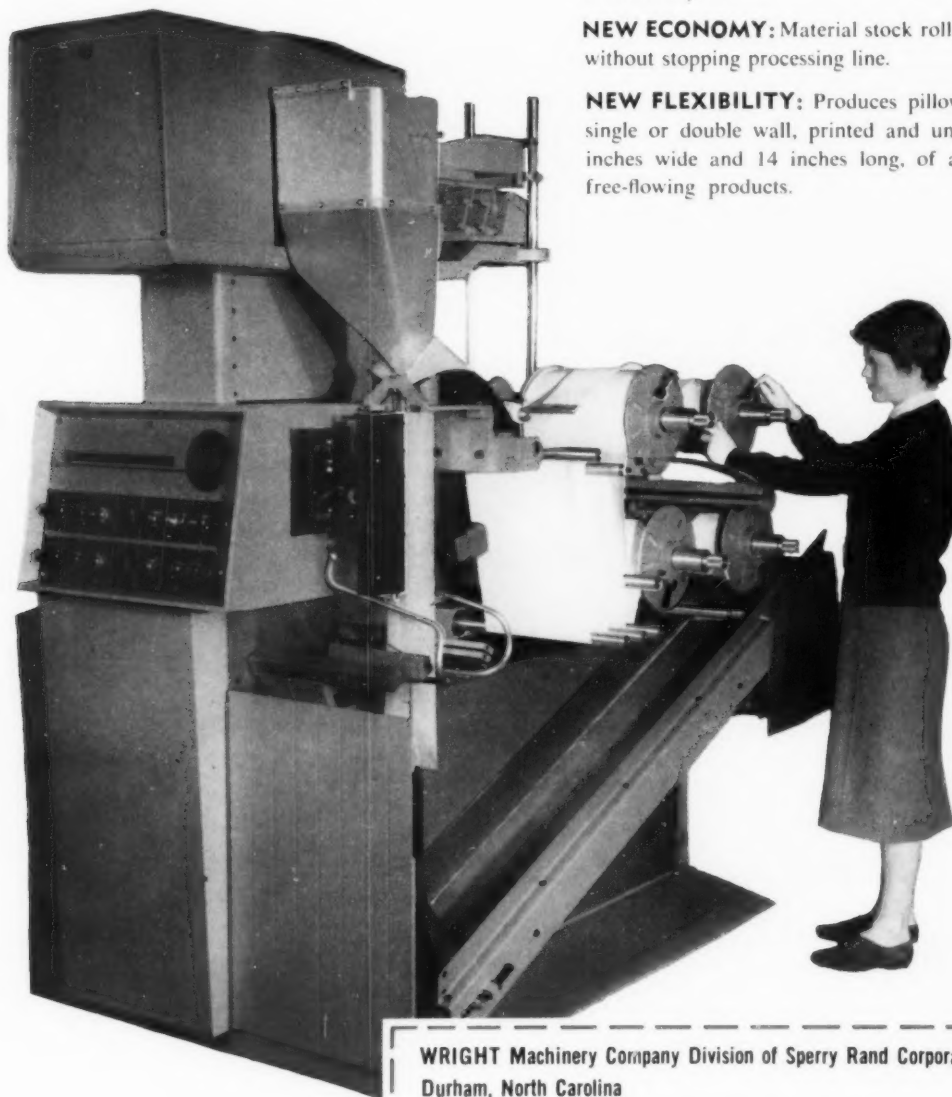
DIVISION OF AMERICAN-MARIETTA COMPANY

611 WEST 129TH STREET, NEW YORK 27, N. Y.

Canadian Affiliate: SINCLAIR AND VALENTINE CO. OF CANADA, LTD., 240 Madison Avenue, Toronto 7, Canada

**ANNOUNCING
THE ALL NEW
WRIGHT ADVANCED**

Bagmaster[®]



This new, 100% automatic bag forming-filling-sealing system will be shown at the AMA Packaging Show in Chicago, April 13-17. Its many advanced, superior features permit the gentle and precisely accurate packaging of even such fragile and multi-dimensional products as potato chips.

NEW DESIGN: Only 7 feet high, including weigher.

NEW WEIGHING ACCURACY: Our new Hytronic net device is an integral part of the system, not just an auxiliary.

NEW ECONOMY: Material stock rolls can be reloaded without stopping processing line.

NEW FLEXIBILITY: Produces pillow type packages, single or double wall, printed and unprinted, up to 8 inches wide and 14 inches long, of a variety of dry, free-flowing products.

WRIGHT MACHINERY COMPANY
DIVISION OF SPERRY RAND CORPORATION
DURHAM, NORTH CAROLINA



WRIGHT Machinery Company Division of Sperry Rand Corporation
Durham, North Carolina

(MP)

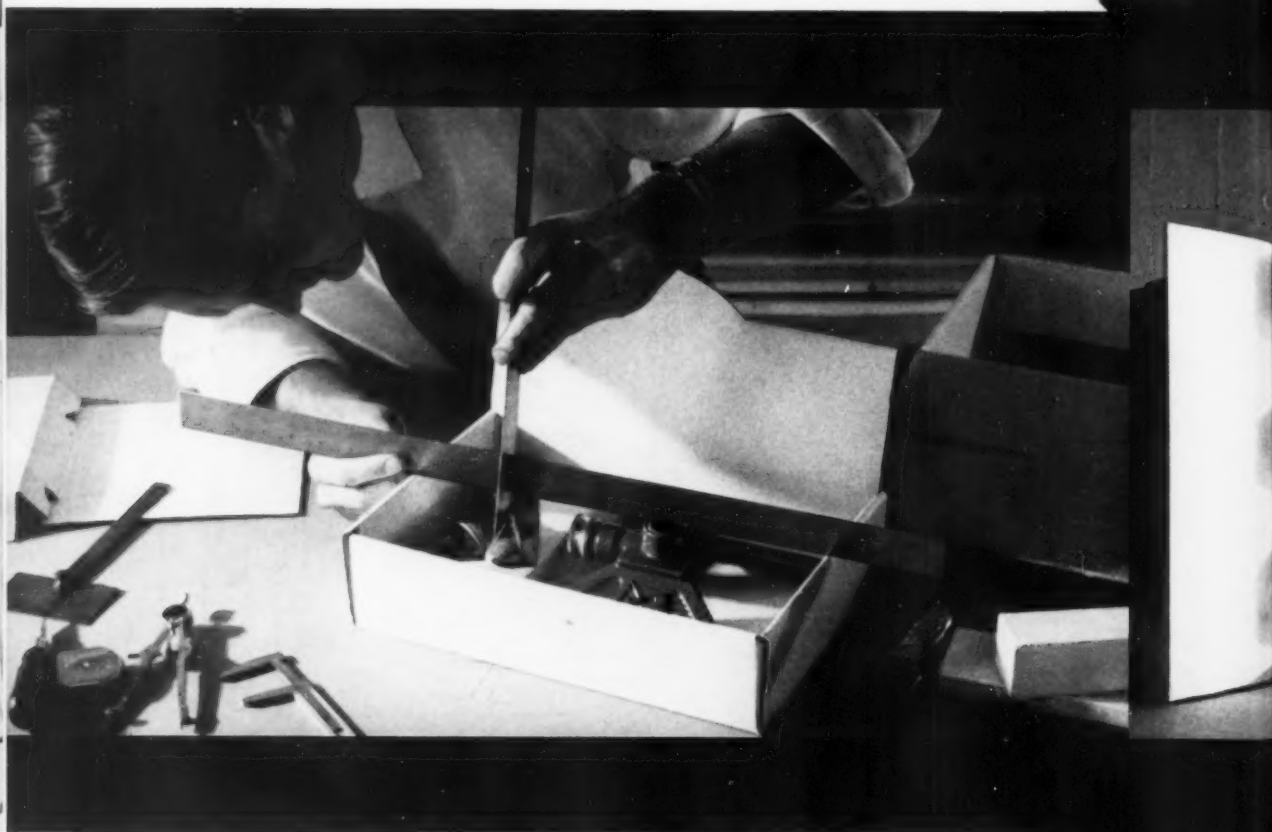
Send me details on your new Advanced Bagmaster System.

NAME & TITLE: _____

COMPANY & ADDRESS: _____

PRODUCTS: _____

*Pay nothing to have these
structural designers work on
your packaging projects*



Here's some of the finest design talent available — and it's yours, free for the asking! This remarkable offer is part of a new Fibreboard program designed to help you reach better packaging decisions.

Today you can get assistance from qualified specialists in market analysis, structural design, graphic design, package testing, and equipment engineering just by calling Fibreboard. These talents are available right now to work with you, your package consultant, or your advertising agency.

Use this new, broader concept of packaging service. Fibreboard specialists will make it easier for you to find ways to package your products better, more efficiently, at lower cost.

The only invoice you'll receive will be for the folding cartons and shipping cases you're going to need anyway. So, the cost is nothing.

Phone or write today.

FIBREBOARD
PAPER PRODUCTS CORPORATION
San Francisco





Paramount Labels

TRIGGER the **pick-it-up impulse**

Watch a shopper. She moves steadily down the aisle glancing at the shelf on the right, then on the left. She keeps moving. Then something clicks — and she picks up a product. A sale is made. Many factors helped make the click. But one of the most helpful is the merchandising flair given products through use of Paramount labels. Attention-getting design and colors make Paramount labels stand out — give products the appeal impact that triggers sales. Let us show you what we can do. Paramount's design service for improving your present label, or designing a new one is free. Paramount labels make you money.



PARAMOUNT PAPER PRODUCTS COMPANY

4401 N. 23rd St., Omaha 10, Nebr. In Canada, 218 Front St. E., Toronto

Label Manufacturers — Specialty Tape Printers





TO ATTRACT
CUSTOMERS

... let Maryland Glass design a
bottle or jar for your exclusive use



When you drop a packaging problem in our lap, the end result is more than a glass container. It is an idea . . . born of restless imagination, shaped by skilled hands, backed by years of sound experience. Our creative staff gives you a selling package that packs well, helps stop the eye and start the sale at the point of purchase. For a successful solution to your design problem, contact MARYLAND GLASS CORP., 2150 Wicomico St., Baltimore 30, Md.

PACK TO
ATTRACT IN

MARYLAND
GLASS BLUE • FLINT
AMBER

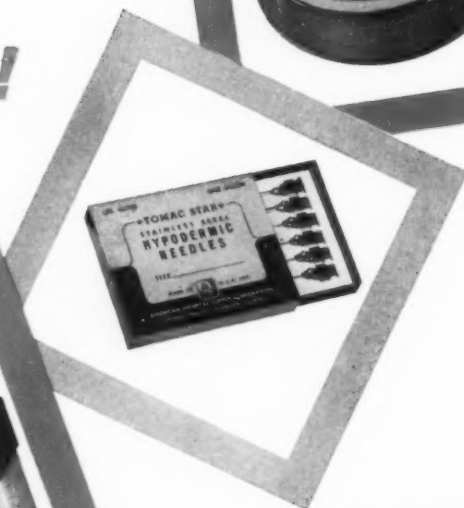
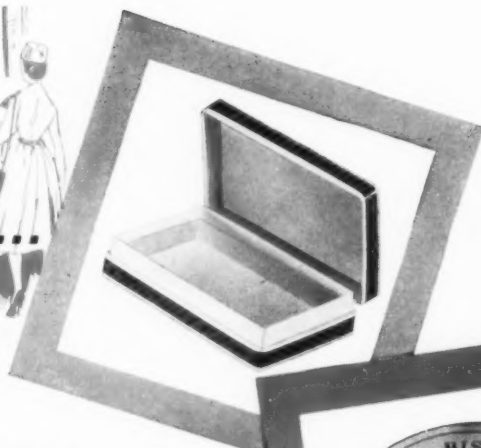


across the counter...



Rowell boxes

keep fine products
on the move!

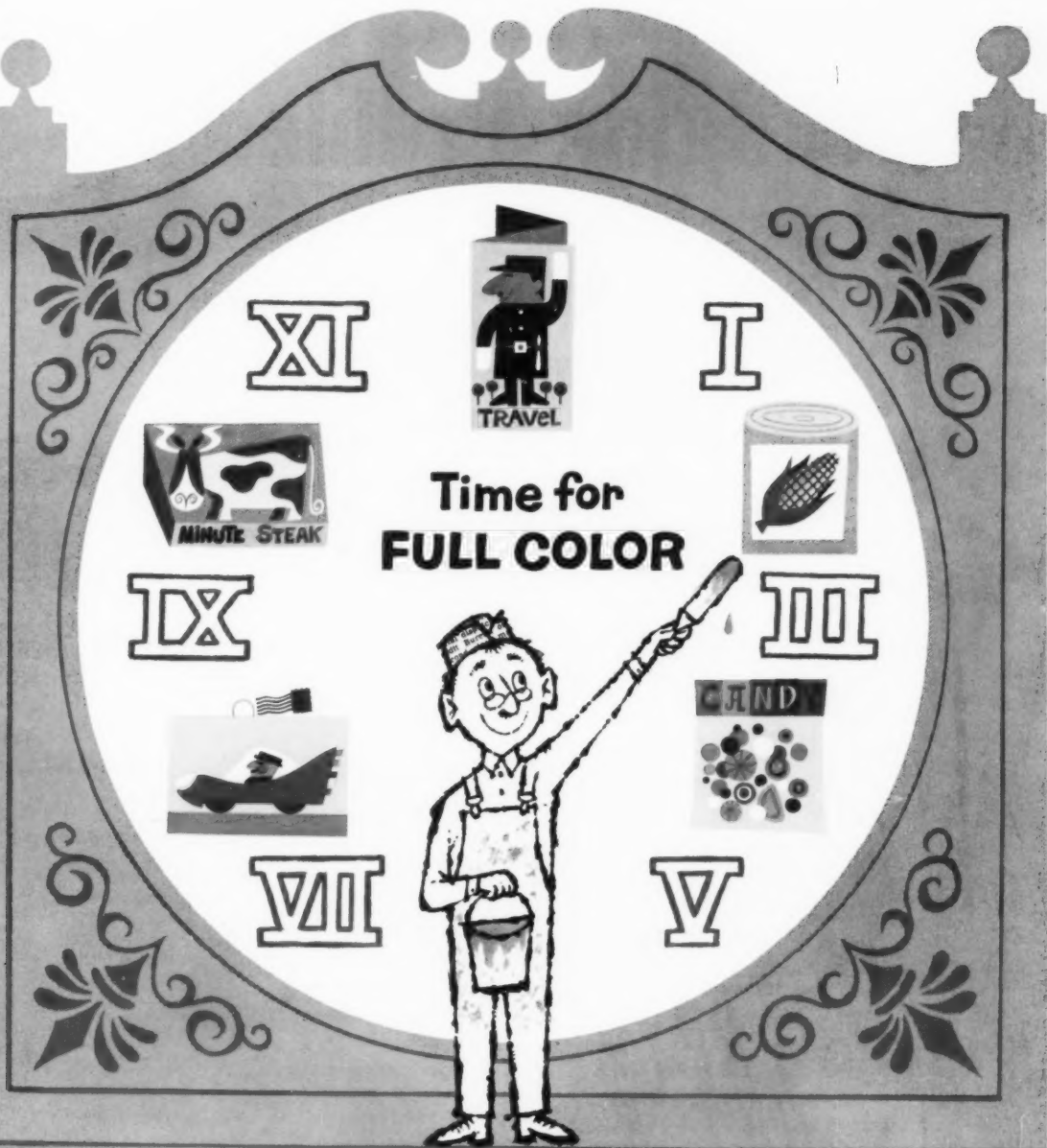


Set-up boxes in a wide range,
made for Cosmetic & Drug Trade
throughout the United States.

Inquiries also invited from
box users in other lines

E. N. Rowell Co.
INC.
BATAVIA, NEW YORK





For today's highly competitive markets, it's time to give your packages and printed material the extra sales appeal of Crocker full color lithography.



PACKAGING • LABELS • FOLDING CARTONS • SALES LITERATURE • ADVERTISING POST CARDS

H. S. CROCKER CO., INC.

PLANTS: SAN BRUNO, CALIF. • BALTIMORE, MD.
SALES OFFICES: 720 MISSION, SAN FRANCISCO
1151 W. 6TH, LOS ANGELES • 350 N. CLARK, CHICAGO

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ST. PAUL & 24TH, BALTIMORE, MD. • 5673 OGONTZ, PHILA
1325 S.W. 13TH, PORTLAND, ORE.

322 COLMAN BLDG., SEATTLE, WASH.
JACKSON, MISS. • WINTER HAVEN, FLA.
MINNEAPOLIS, MINN. • OMAHA, NEBR.

Packaging Problem?

Use your NEW Encyclopedia Issue!

It's a fact-crammed workbook

for day-to-day problem solving.

EXAMPLE: How to plan your package?

1. See section "Developing the Package" for sound approaches to the many-faceted problem.
2. Next, consult the Advertisers' Index on the first page of this section for advertising of packaging consultants, contract packagers and materials suppliers.
3. Then turn to Buyers' Directory for state-by-state listings of: packaging designers, contract packagers, engineering consultants, custom embossers and laminators, paper lithographers, independent research and testing laboratories, and sample and package distributors.
4. Check the "Free Product Literature" section, select all possible helpful publications and send for them with enclosed postage-free cards.

EXAMPLE: How to improve packaging line efficiency?

1. Read the section "Equipment for the Packaging Line" for a complete picture of the factors involved.
2. Then turn to the Advertisers' Index on the first page of this section and select ads whose contents bear on your problem.
3. Get further information in the Buyers' Directory: names and addresses of engineering consultants, machinery manufacturers and service organizations.
4. Check the "Free Product Literature" section, select all possible helpful publications and send for them with enclosed postage-free cards.

EXAMPLE: Which packaging papers to use?

1. Read section "Papers for Packaging" for all the fundamentals.
2. Then check the Advertisers' Index—on the first page of the section—for adjoining ads on basic papers, coated papers, boxboard, fancy papers, coatings, etc.
3. Secure additional names and addresses of suppliers from Buyers' Directory rosters.
4. Check the "Free Product Literature" section, select all possible helpful publications and send for them with enclosed postage-free cards.

EXAMPLE: Where and how to use aerosols?

1. Get detailed application information in the "Aerosols, Valves and Propellents" section.
2. Then, for ads by aerosol component suppliers, see the Advertisers' Index on the section's first page.
3. Next, examine the Buyers' Directory for names and addresses of suppliers of aerosol containers, propellents, valves, loading machines, etc.
4. Check the "Free Product Literature" section, select all possible helpful publications and send for them with enclosed postage-free cards.

The Encyclopedia is expressly designed to help you solve your problems. Reach for it next time you need help and see how valuable it can really be!

MODERN PACKAGING ENCYCLOPEDIA ISSUE

... for fast, accurate answers to packaging problems

Enter now...SCOTCH BRAND TAPES TAPE-O-RAMA

135
FABULOUS
PRIZES



FIVE 1st PRIZES*


**Westinghouse
Dream Kitchens**


or alternate Westinghouse equipment
of equal value


EACH KITCHEN INCLUDES:


Refrigerator	Laundromat	Electric Fry Pan
Home Freezer	Clothes Dryer	Metal Cover
Electric Range	Appliance Center	Portable Mixer
Portable Dishwasher	Grill-N-Waffler	Coffee Maker

**PLUS 130 OTHER PRIZES
WONDERFUL WESTINGHOUSE APPLIANCES**

20 2nd PRIZES: Choice of refrigerators, ranges or Laundromats 

25 3rd PRIZES: Choice of portable dishwashers or clothes dryers 

25 4th PRIZES: Portable television sets 

30 5th PRIZES: Transistor radios 

30 6th PRIZES: Choice of electric blankets or portable mixers

*3M will pay up to \$300 installation charges on all first prize awards.

MANUFACTURING PERSONNEL...

Easy to enter...easy to win!

Contest open to all personnel of manufacturing plants within the continental limits of the U.S.A., except employees of Minnesota Mining & Mfg. Co., their subsidiaries, their advertising agencies and their families. Entries must describe a new non-electrical usage for "SCOTCH" BRAND Industrial Tapes and/or dispensing equipment which is initiated in the entrant's plant during the TAPE-O-RAMA contest period, February 1, 1959 to June 30, 1959. Winners will be determined on the basis of benefits derived by entrant's plant, and the industry of which that plant is a part.

HURRY—Get your official entry blank and details from your "SCOTCH" BRAND Tape Distributor or 3M Representative. Use coupon below to request his call, or contact him direct.

TAPE-O-RAMA CONTEST Dept. GJP, 900 Bush Avenue, St. Paul 6, Minnesota

Name

Job

Company

Company Address

City Zone State

"SCOTCH" is a registered trademark for the pressure sensitive adhesive tapes of 3M CO., ST. PAUL 6, MINN. EXPORT: 49 PARK AVE., NEW YORK 16, N.Y. CANADA: LONDON, ONTARIO.

MINNESOTA MINING AND MANUFACTURING COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW



CHROME-PLATED STAINLESS STEEL



ENGRAVED CYLINDERS

Packagers are discovering the great variety of packages—milk cartons to liquor labels—and products—match books to wallpaper—that can be printed by these high fidelity cylinders. Alert converters realize too, that when printing critical materials—by direct rotary or offset—they can be confident of perfect results every time with stainless steel—the material that outlasts all others and after years of use, prints beautiful packages that are fully as perfect as the very first impression!

Faultless 4-color registration at speeds up to 800 impressions a minute.

Cylinders in any size up to 36" long.

Patterned glue rollers that create extremely strong gripping surfaces.

Make your next impression a permanent one—make it a steel engraved cylinder by Vitra-Tone. Write for details.

VITRA-TONE ENGRAVING CORPORATION

345 BERGEN STREET, BROOKLYN 17, N. Y. • ULSTER 8-5712

Background for Packaging

It wasn't such a bad year, after all. Latest figures indicate that the Gross National Product for 1958 approximately matched the record \$440 billion of 1957. And personal income (the vital factor in the sale of packaged goods) reached a record total in 1958 of over \$353 billion, an increase of \$5 billion over 1957. The recovery curve started upward in April and it appears that MODERN PACKAGING was right when it said editorially, in March, 1958: "We would . . . venture the guess that a year from now we may look back to March, 1958, as a turning point."

Another way to measure recovery is to watch sales of products heavily used in industry. Sales of printing ink, Sun Chemical notes, have for each of the past five years accounted for about 0.5% of the Gross National Product. As an indicator, this essential packaging item projected a business growth in the last quarter of 1958 that was borne out by subsequent events. Now similar data project a 4% general improvement this year, promising a GNP of at least \$460 billion for 1959.

Look for the Food and Drug Administration to consider early this year—and perhaps approve—Freon-C318 liquefied propellant for food aerosols. Exhaustive animal experiments conducted by Du Pont, the manufacturer, are said to have considerably shortened the two-year test period normally required. However, despite the more uniform dispensing pressure of a liquefied propellant throughout product life, Freon-C318 is expected to meet consumer resistance because of its anticipated higher price: \$1.50 to \$2 per pound compared with 5 to 25 cents per pound for compressed gases. Even so, Du Pont foresees a preference for Freon as a food propellant where foamed or slightly foamed discharge is preferred, particularly for specialty food products.

Note the gains for metal cans, particularly in recently developed specialties. They show the value of packaging research. While sales of all cans last November were up 10.9% over November, 1957, soft-drink cans gained faster than any other category, showing a 56% increase in the year's period. The non-drip, screw-top can, introduced to the market only five years ago as a detergent package, has grown to an estimated sale of 400 million units in 1958, moving rapidly into such additional product fields as edible liquids, lotions, oils, medications, and household and painting accessories.

Limitless applications are envisioned for a new extensible paper with equal stretch in all directions. Developed by West Virginia Pulp & Paper—which created the original Clupak paper that stretches in the machine direction only, but is already finding varied use in packaging—the new material boasts greater toughness and versatility. At present, it is produced only on Westvaco's pilot equipment.

Prospects for high-density polyethylene in the packaging field are improved by recently announced general price cut. Phillips Chemical started it in January with a slash of 5 cents, dropping basic price for high-density resin from 43 to 38 cents per pound. Other producers were quick to follow suit. Prevailing price of high-density material is now only 3 cents above that of the low-density variety.

Greater growth potential than ever before is seen for the flexible-packaging industry as the result of changes [Continued on page 42]

Notes,

quotes

and comments

so white...

so sanitary...

so appealing

CREME
Shampoo



WHITENING TEETH
TOOTH
PASTE

.....**BRITE-PAK ENAMEL COAT**

In the tough competition for sales among beauty and drug preparations, Enamel Coat bleached board is a full-time salesman for your product — and right where it counts most!

First, on the store shelves — second, in milady's home where it re-sells her.

A Brite-Pak carton invites re-purchase . . .
because it is *clean, white and sanitary on both sides*
and *all the way through*.

Brite-Pak Enamel Coat really pays off — it's that *outstanding!*

Your own eyes show you why. Enamel Coat's gleaming surface takes full color process printing — words and pictures — so brilliantly that ordinary cartons look old-fashioned!

What's more, Brite-Pak is *economical!*

Write or call for full information. Bleached Board Division,
West Virginia Pulp and Paper Company,
230 Park Avenue, New York 17, N. Y.

**West Virginia
Pulp and Paper**



and economies forced by last year's recession. As pointed out by *Roland N. Ewens*, Milprint chairman, the slow-down in shipments and resultant squeeze on profits brought about further production economies by converters and led to the development of new and improved products. And, says Ewen, additional improvements are being made all the time which will further benefit the packager in various areas of printing, bag making, film manufacture, laminations and extrusions.

Battle for shelf position takes a significant new turn with the news, as reported by *Wall Street Journal*, that P. Lorillard Co. has begun paying stores "rentals" of from \$5 to \$10 per month on an annual basis for eye-level spots. One of the largest food chains (400 stores) reportedly has signed up and two more are "interested." Other cigaret manufacturers are reported to be rushing their own "incentives" to food stores to counteract the Lorillard offer.

Background

for

Packaging

[Continued from page 39]

Generally overlooked, in the growth of produce pre-packaging as a retailer operation, was one of the original aims of the packaging concept: to cut waste and spoilage between the field and the store. Now, with shipping rates for produce soaring (up 60% in 12 years) and spoilage running to 11% on fresh fruit and 8% on vegetables, this factor is coming in for re-examination. Why pay high freight rates on produce that will be trimmed or discarded on arrival? According to Government figures, about 30% of all produce is now packaged before reaching the store. One authority predicts that by next year this proportion will be 50% and that in a few more years it will reach 85%.

Notice the growth of the plastics industry, largely accounted for by packaging. Consumption of synthetic resins and cellulotics, including coatings, in 1958 set another new record at an estimated 4,157,200,000 lbs., up 4% over 1957, according to *Modern Plastics* magazine. Biggest growth was in polyethylene, up 25% in the year, to become the biggest of all plastics materials at an estimated 1958 consumption of more than 800 million pounds. A 10% expansion in all plastics is predicted by *The Society of the Plastics Industry* for 1959, approaching the five-billion-pound mark.

Note how the multipack is beginning to bridge more fully the gap between the unit package and the case lot. The *A. Gettelman Brewing Co.* of Milwaukee has just brought out a corrugated 12-pack of 12-oz. cans of beer. A half-size miniature of the regular 24-can case, it gives the buyers some savings over two six-packs and also provides easy handling and storage for cooling. Consumer demand impelled it, says Gettelman. (For an up-to-the minute report on this subject, see "New Aspects of Multipacking," p. 75.)

Vastly improved packaging materials and perhaps the radiation processing of foods are among achievements anticipated with the operational start of the world's largest privately owned and operated nuclear-research reactor at Plainshoro, N.J. Among the 10 participating companies, here are the prospects: U. S. Rubber looks for new and better plastics, including tougher, more heat-resistant polyethylene; National Distillers & Chemical Corp. plans to use radiation techniques to develop new plastics materials and new techniques for polymerization of olefins, largely in polyethylenes; Continental Can Co. expects to apply radiation physics and chemistry to analyze, measure and process its packaging materials and to strive for successful radiation processing of food; Corning Glass will work on developing stronger, more durable glass.

Feminine colors, already being put to work to push sales of many impulse items in supermarkets, can be applied effectively in the packaging of hardware items, dealers say. Reason: women make up 85% of today's traffic in hardware outlets, according to a joint survey by the *National Retail Hardware Assn.* and Container Corp. of America.

"How do we
love acetate?"

Let me count
the ways...



...as film for windows
in greeting cards,
sleeves for gift wraps,
backing for ribbons
...as sheeting for
transparent box covers,
gift boxes, even
as our display's
lighting cove."

Norcross and acetate have worked together for a good many Christmases, Birthdays, and Anniversaries. This partnership has produced many sparkling ideas in the design and packaging of greeting cards and gift wrapping materials. Probably one reason for this is the fabricating versatility offered by Celanese acetate. There are so many effective ways manufacturers can employ acetate's sparkling transparency, toughness, and long life. Personal assistance, to help you apply Celanese acetate film and sheeting to your product or packaging, is available upon request.

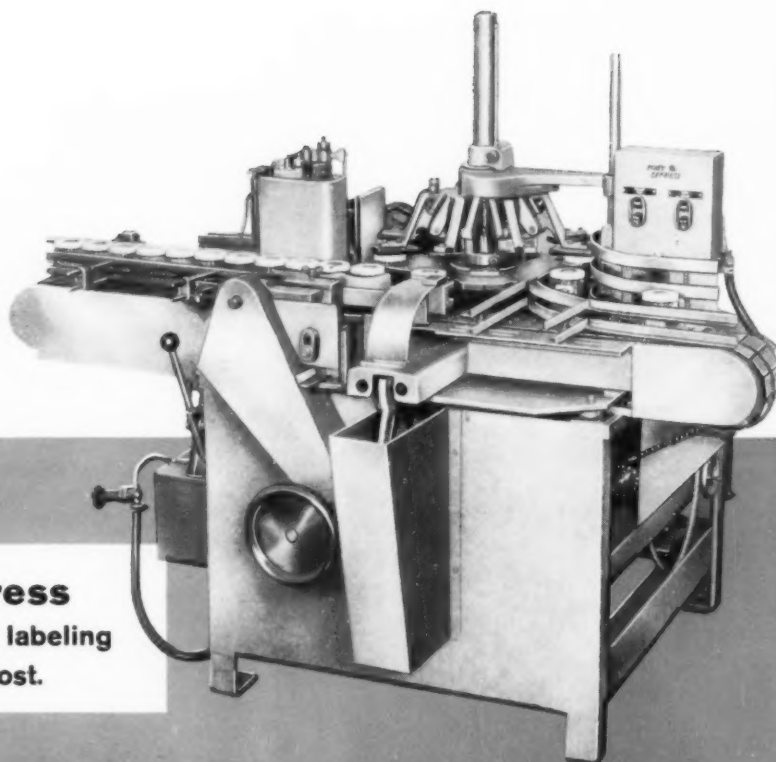
Celanese®

acetate... *Celanese* packaging films and sheeting

Celanese Corporation of America, Plastics Division, Dept. 108-C, 744 Broad Street, Newark 2, N. J.

Canadian Affiliate: Canadian Chemical Company, Limited, Montreal, Toronto, Vancouver.

Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.



Pony Express
delivers precision labeling
at low unit cost.

Fully automatic SUCTION labeler handles any shape label and container

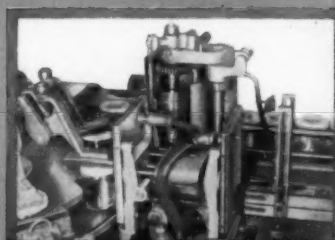
Your first and immediate saving with the Pony Express is that you eliminate the operator. Compared with semi-automatic labeling, you increase production as much as 50 per cent and at one and the same time you both reduce cost and improve package appearance.

The exclusive suction-principle operation of the Pony Express removes labels from hopper without assistance from the glue. Glue is used only for adhering labels to containers. Label registration is accurate to within 1/64" regardless of container's shape.

The Pony Express has a micro-controlled glue system that coats each label with a fine, even film of adhesive. This over-all gluing means containers are labeled with edges down tight. Glue seepage, loose-corners, hand retouching are eliminated entirely.

The Pony Express can be used for short runs as well as for volume production. Change-over from one job to the next takes only 25 minutes for both label and container. On large runs, the non-stop label loading feature permits longer, uninterrupted production.

Prices start at less than \$6000. Write for new bulletin.



Suction Guarantees Perfect Label Placement. Label is controlled by the positive holding force of suction until the moment it is adhered to the container. It cannot shift in transit. Perfect registration is absolutely automatic.



Labels Gallon Jugs at 35-Per-Minute
Spatola Wines Inc., Philadelphia, Pa. uses a Pony Express for this assignment. On quarts the Pony Express labels up to 65 per minute.



NEW JERSEY MACHINE CORPORATION

GENERAL OFFICES AND PLANT: 1500 Willow Avenue, Hoboken, New Jersey
FACTORY SALES AND SERVICE BRANCHES: Chicago, Cincinnati, Los Angeles
EUROPEAN MANUFACTURING AND SALES HDQRS.: Packaging Machinery (Peters) Ltd., Slough, England
A dependable packaging machine source for 40 years.

**EASY DOES IT...
EASY SELLS IT!...
with Aerosols**



NOW! AEROSOLS SPRAY PAIN AWAY

Pharmaceutical aerosols may see next big market break-through!

Right now, pharmaceuticals are the fastest growing of all aerosol product groups. Pressure-packed drugs showed a sales increase of 155% in 1957 over 1956—compared to a 22% increase for all aerosols. A major market break-through seems imminent—for products such as spray-on burn remedies which are now being marketed, and for a host of other pharmaceutical products which have yet to be put up in aerosol form.

Right now's the time to plan on capturing *your* share of this market. And while you're considering aerosol packaging for your medicinal product—or any other product that can be sprayed, poured, brushed, dusted or daubed—General Chemical can be of real help to you in many different ways.

Help in making and marketing

As a leading producer of aerosol propellants, General Chemical offers many helpful services to present and prospective aerosol marketers.

Advanced research in our aerosol laboratories has led to the development of typical formulations for a number of new aerosol product ideas. For example, *Product Information Bulletins* are available now on such new aerosol pharmaceuticals as Athlete's Foot Medication, Burn Remedy, External Analgesic, Nasal Relief Spray, Neomycin Spray and Foam, Poison Ivy, Oak and Sumac Remedy, and Medicated Hand Lotion. Write for free copies of any or all, and ask to be put on our mailing list for new *Bulletins* as they are developed.

We will also be glad to put you in touch with highly capable contract fillers, who can put up small runs for

you or handle full-scale commercial production. They will work with you from planning and testing through to volume filling. You don't have to invest a cent in equipment or production personnel when you work with these contract fillers!

General Chemical services include:



New Product Ideas



Technical Literature and Market Data



Technical Assistance with Product Development and Formulation

For further information—or if you would like to arrange for a special presentation—write today to "Genetron" Dept., General Chemical Division, Allied Chemical Corporation.

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aerosol propellants

Putting the "push" in America's finest aerosols



GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N. Y.



IMPULSE PACKAGING ...with the basic

**Cellophane provides crystal clarity that creates buying desires ...
assures freshness, color-prints vividly**

People like to see what they buy. That's why it's smart to start with transparency in package planning. Crystal-clear Du Pont cellophane lets your product's color, shape and texture sell for itself ... takes on flattering colors for package designs ... gives you excellent vapor

and moisture protection ... high-speed production. This balance of properties makes cellophane the most efficient packaging material you can use.

New, extra-brilliant, extra-protective "K" cellophanes are the culmination of 34 years of transparent-packaging ex-

perience at Du Pont. Let this experience help you to a better package. See your Du Pont Representative or, for printed films and bags, your Du Pont Authorized Converter. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.



sales power of pure transparency

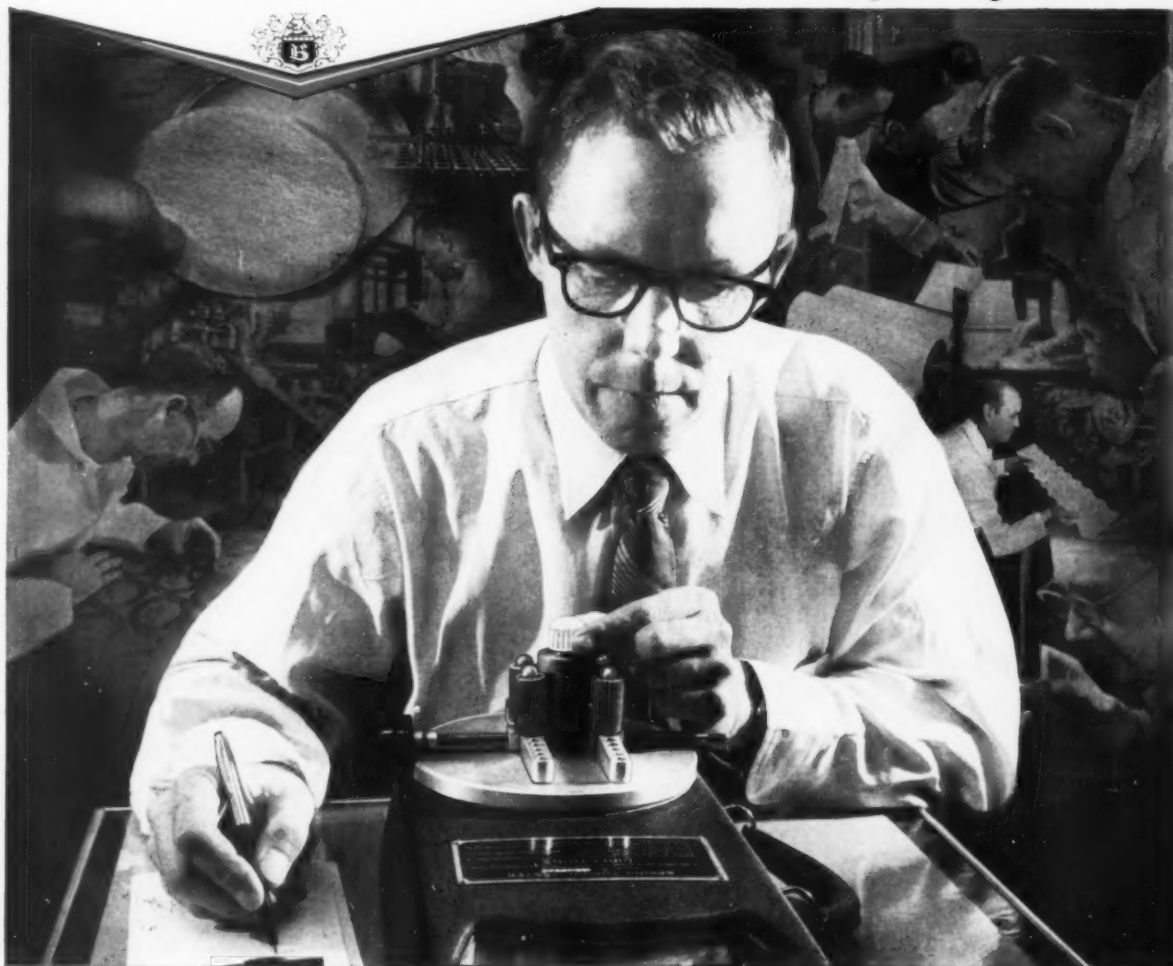


REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

DU PONT
cellophane

With Bernardin. Quality is a **SERIES** of satisfactions



"PROOF OF THE PUDDING"

This is the laboratory, where science and statistics prove—or disprove—whether a new coating *is* superior; whether that change on the pressline was good; whether that experimental die-hardening process justified the extra time. This is where incoming components run a critical gamut before acceptance. This is where chemistry, physics, metallurgy, and every appropriate testing device is at hand for technicians who have but one responsibility. Prove—or disprove.

This laboratory provides Bernardin men with a constant measure of methods, of materials, of the quality of each phase of production. The sum of those many phases is the closure—metal or plastic—which delivers the whole *series* of satisfactions for which it was designed and produced. Only that is Bernardin quality.

QUALITY METAL AND PLASTIC CLOSURES BY


BERNARDIN
Bernardin Bottle Cap Co., Evansville, Ind.



KEEP YOUR PACKAGE ABLAZE

New, Ready-Mixed

IC[®] Metallic Paper Coatings

**Non-tarnishing! Non-fading! Non-bleeding!
Non-smudging! Non-gelling!**

To give your package a brilliant sparkle that will **STAY** that way however long it remains on display, be sure it's coated with an IC Metallic Paper Coating.

Available in a broad range of iridescent pastels as well as brilliant aluminum, gold and copper shades, IC Metallic Paper Coatings are *ready-to-use*! No more messy mixing on the job! No more wasted coverage! No more fear of gelation or loss of brilliance in storage! IC Metallic Paper Coatings can be overprinted with transparent or opaque inks providing unlimited decorative possibilities.

Investigate this **LOW COST** method of producing metallic effects. Contact your nearest Interchemical representative **NOW** for details.

Put this page to your own test. Notice its metallic brilliance. Test its resistance to tarnishing, fading, bleeding and smudging. See how effectively it will keep **YOUR** package ablaze!

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CORPORATION
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The package with more than impulse power

SHE USES THE PLUS CONTAINER! The world of these bright, pert packages is not limited to the refrigerator or pantry shelf. The Plus Container goes to parties, comes to dinner, pops in and out of ovens as easy—and convenient—as you please. In other words, this package is useful. And

how shoppers love it, come back to buy more. Retailers also like the Plus Container because it's foil. Like to know more about the functional Plus Container? Talk to us about your needs. We are the largest rigid aluminum foil container manufacturer in the world. We know how to help you.

The Plus Container



EKCO-ALCOA CONTAINERS INC.

WHEELING, ILLINOIS • WHITTIER, CALIFORNIA • LONG ISLAND CITY, NEW YORK

EKCO is the registered trademark of Ekco Products Company, ALCOA is the registered trademark of Aluminum Company of America. The corporate name and combination mark, EKCO-ALCOA, is used under license to the manufacturer by each of these companies.



*The Plus Container
can contribute more
than impulse power
to your product, too...*

FOR INSTANCE ...

These containers are Ekco-Alcoa's new Ribfoil® containers that are engineered for unusual strength, colorful attractiveness, hermetically-sealed product protection. These containers open new avenues of merchandising offering gleaming shelf appeal and disposable convenience.

Applications—Such containers can be used for anything from lobster to ice cream ... baked beans to meat spreads ... barbecue sauce to herring ... horseradish to jams ... chili to cottage cheese.

Capacities—These new Ribfoil® containers range in sizes from 4 fluid ounces to 16 fluid ounces with depths from 1½ inches to 2½ inches with full curl rims. They are available in red, gold, green, orange, purple and yellow outside colors and inside vinyl coatings.

Closure—Closure can be made with insert discs—plain or printed; transparent or foil hoods. Ribfoil® containers add the advantage of protectively-sealed products in rigid aluminum foil container packages. Ekco-Alcoa has a complete line of closure equipment for these containers from hand-operated machines to fully automatic packaging systems.

Other containers are available in a variety of sizes and shapes ... patty pans, deep pie dishes and casseroles, pie plates, seamless round, seamless oblong and square, folded end, compartment trays, pizza pans, cups and many other specific-use packages. Capacities range from 1.25 to 65 fluid ounces. Choice of colors, printing, perforations and coatings.

Ekco-Alcoa offers unmatched selection. Here you have the largest line of stock containers to choose from plus unexcelled engineering skills to develop special containers for your needs. A complete line of packaging equipment and engineering assistance in setting up a packaging operation are also available.

When you require information or packaging counsel call one of our representatives or write for the name of your nearest distributor



The Plus Container

EKCO-ALCOA CONTAINERS INC.
WHEELING, ILLINOIS • WHITTIER, CALIFORNIA • LONG ISLAND CITY, NEW YORK

EKCO is the registered trademark of Ekco Products Company, ALCOA is the registered trademark of Aluminum Company of America. The corporate name and combination mark, EKCO-ALCOA, is used under license to the manufacturer by each of these companies.

NOTHING SELLS LIKE

natural wood



NATURAL WOOD FOR utility

For added utility, natural wood is the natural choice. To combine desirable packaging, functional appeal and consumer reusability, purveyors of gourmet foods and fine wines and liquors choose from a variety of versatile containers by Dunning.

Whatever your sales appeal, it can be enhanced by the tasteful touch of wood packaging. Whatever the character of your product, Dunning can help you express it with the appropriate package or display. Select from an unlimited variety of woods, textures, grains, and finishes; add prestige and protection at lowest cost. No other packaging material is so versatile or appealing. And in the skillful use of fine woods, no one is so experienced as Dunning.

Like to see more dramatic applications of wooden boxes, cases and displays, gift and specialty items? Write today for complete information.



1950 POST ROAD DARIEN, CONNECTICUT

FACTORIES AT: BIDDEFORD, MAINE • BELLOWS FALLS, VT. (2) • MIDDLETOWN, N.Y. • LYNCHBURG, VA.

AND THE REAL BEAUTY OF IT IS

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glame
line s
mach
to pu
Wha
SASH



It co
wrap
more

"SASH
99 Park

MA

MORE SALES

FOR YOUR PRODUCT NEXT CHRISTMAS WHEN YOU

PRE-GIFT WRAP WITH

Sasheen® AND THE S-71 "MYSTERY MACHINE"

BRAND RIBBON

Pre-gift wrapping is the smartest Christmas merchandising idea of the decade. Now it's a practical reality for your product because the S-71 "mystery machine" is here!

This amazing new bow maker ties and finishes glamorous bows — completely — with production line speed and economy. Turn the handle — the machine does the rest. No strings to tie, no loops to pull. And how easily bows attach to packages! What's more — when you pre-gift wrap with SASHEEN® and DECORETTE® Brand Ribbons you

get extra pluses. You get the most in beauty, best workability of any ribbon. And bows won't wilt — stay fresh and sales-appealing on the shelf.

More and more manufacturers are proving pre-gift wrapping pays off in increased sales. You can, too! It will cost you nothing to learn how. Fill out and mail the coupon below right now!

See the S-71 Bow Maker in action at the AMA National Packaging Exposition in Chicago, April 13 through April 17. Visit the 3M Company Booth at the International Amphitheater.




ECONOMICAL? THE MOST!

FAST? PHENOMENAL!

EXPENSIVE? YOU LEASE IT!

PROOF? FREE DEMONSTRATION!

 **YOUR PRODUCT?**

It could be! The S-71 Bow Maker helps you pre-gift wrap quickly, economically, beautifully to wrap up more Christmas sales!

WRITE TO: Gift Wrap & Fabric Division, 3M Company,
Dept. VO-39, St. Paul 6, Minnesota

Gentlemen:

I'd like to learn more about increasing my sales with SASHEEN Brand Ribbon and the S-71 Bow Maker. Please have your 3M representative call and give me a free demonstration.

NAME _____

COMPANY _____

ADDRESS _____

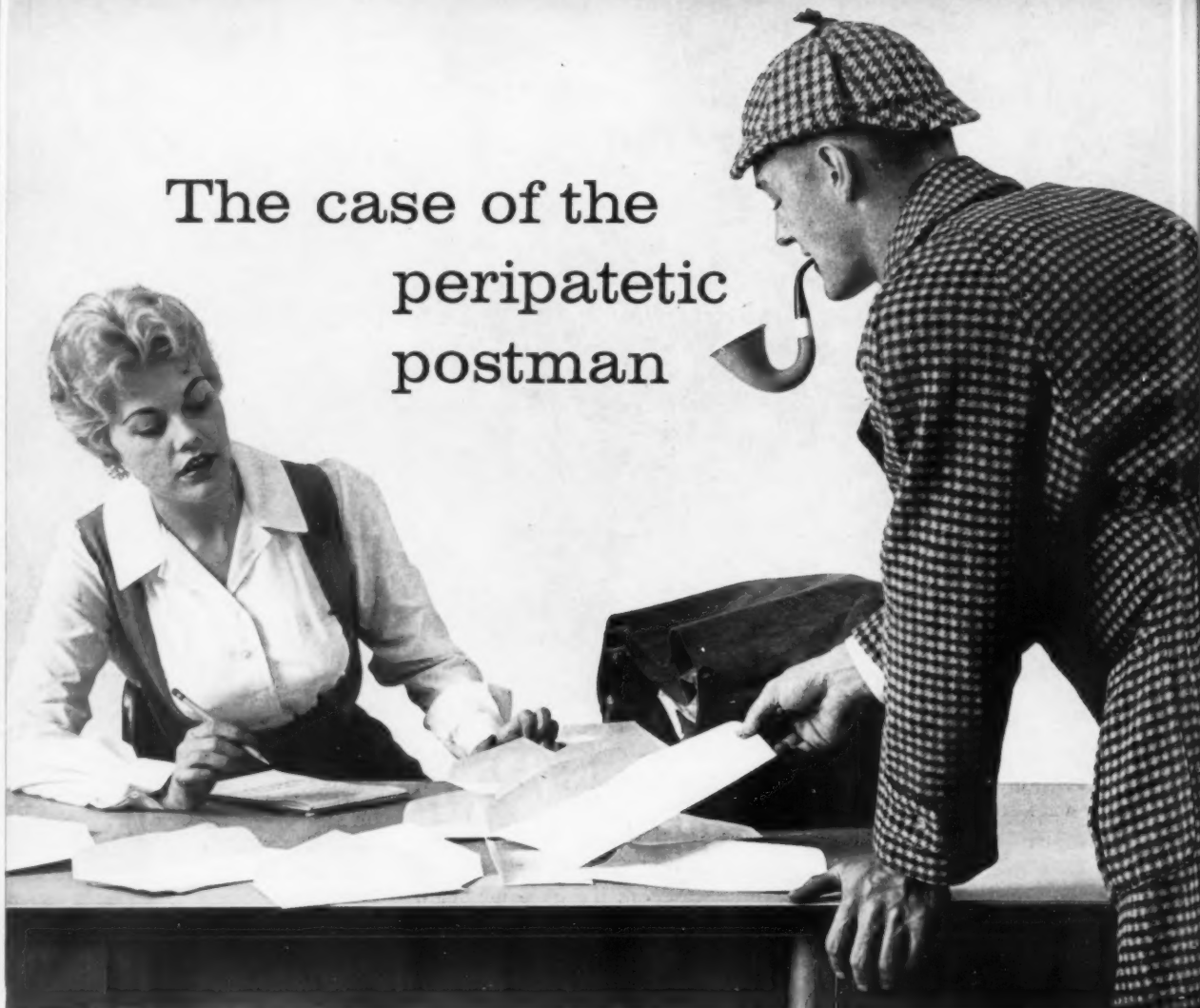
CITY _____ ZONE _____ STATE _____

MINNESOTA MINING AND MANUFACTURING COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW



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The case of the peripatetic postman



FEARLESS FULLER: Have you ever played postoffice, Miss Watson?

MISS WATSON: Why, Fearless, I practically invented the game.

FEARLESS FULLER: Well, I'm not referring to games. I'm talking about a postal problem concerning envelopes.

MISS WATSON: Tell me all, Fearless.

FEARLESS FULLER: Well, yesterday I encountered a sad mailman picking up empty envelopes in the street.

MISS WATSON: What happened?

FEARLESS FULLER: It seems a large quantity of letters from the Widget Manufacturing Company came apart in the mail.

MISS WATSON: How come?

FEARLESS FULLER: Well, the adhesive used on the front seal of the envelopes wasn't Fuller's, and it gave way and all the envelopes popped open.

MISS WATSON: You mean the letters fell out of the envelopes?

FEARLESS FULLER: That's right. It was a real mess.

MISS WATSON: How did you solve the problem, Fearless?

FEARLESS FULLER: Well, I recommended that the envelope manufacturer switch to Fuller's #1515 adhesive as a front seal.

MISS WATSON: Fuller's #1515?

FEARLESS FULLER: Yes, It's the ideal envelope gum. It seals perfectly, has high gloss and good lay-flat qualities, machines cleanly and won't block or check. Now the manufacturer has no more envelope problems.

MISS WATSON: Why, I'll bet #1515 even tastes good.

FEARLESS FULLER: As a matter of fact it's odorless and tasteless.

MISS WATSON: You're the greatest, Fearless.

FEARLESS FULLER: Elementary, my dear Miss Watson. Neither rain nor snow nor dark of night can deter a Fuller man from finding the correct solution to adhesive problems.

Your Fuller man is ready with the correct solutions on any adhesive problems for you, too. Contact your nearby plant.

H. B. Fuller Co.

255 Eagle Street, St. Paul 2, Minn.

ST. PAUL, MINN. • ATLANTA, GA. • BUFFALO, N.Y. • CHICAGO, ILL.
CINCINNATI, OHIO • DALLAS, TEX. • KANSAS CITY, MO.
LINDEN, N. J. • LOS ANGELES, CALIF. • MEMPHIS, TENN.
PORTLAND, ORE. • SO. SAN FRANCISCO, CALIF. • TAMPA, FLA.

Are You Producing All These Jobs in One Operation?



Just one operation completes any kind of tag—merchandise, shipping, manifold—with any kind of tag material right up to .050 board—when you use one New Era Press operated by just one pressman.

Most Profitable Way to Produce

TAGS



LABELS

Produced at Lowest Costs

You can complete in one operation any type of label, using any type of label stock including heat seal, pressure sensitive and other materials—with one New Era Press at speeds up to 7,500 impressions per hour. Finished product is delivered either cut off, rewound or folded.



FORMS

Completed in Any Size

Why pass up or farm out short-run orders of 5,000 to 30,000 sets for any size snap-outs and continuous forms when one New Era Press does the jobs profitably with minimum changeover and downtime. There is no limit to size of forms as with a rotary press.

FROM PAPER ROLL TO COMPLETED PRODUCT IN ONE HIGH-SPEED OPERATION

That's the New Era Press! It prints any number of colors on one or both sides of the web at the same time, die-cuts any shape or size, slits, punches, perforates, numbers and delivers the finished job—either cut off, rewound or folded—at the end of one run by one pressman. The New Era Bulletin also shows how the New Era Press handles bag headers, tickets, specialties. Write on your company letterhead now for your free copy of the New Era Bulletin.

NEW ERA



**Also produces
Bag Headers, Specialties,
Tickets, many other products**

MANUFACTURING CO., DEPT. MP, BOX #400, HAWTHORNE, NEW JERSEY
Manufacturer of the finest printing presses for more than 59 years



New Era Booth 147

Paper Coated with **SYL-OFF**

*lifts easily and cleanly
from all sticky
products*

Here's a new, effective way to speed processing and handling of sticky products. How? By using packages or interleaving sheets coated with one of the new SYL-OFF* silicone paper coatings. SYL-OFF coatings speed handling, reduce product waste, provide a new selling advantage.

A SYL-OFF coating gives excellent anti-adhesive properties to paper and paperboard containers — from glassine to boxboard. Permits removal of all the product quickly, without sticking and tearing. Even the gummiest products won't adhere to a SYL-OFF coating. Of over 100 materials tested — including asphalt, candy, glue, adhesive, unvulcanized rubber — none was found to stick except a silicone adhesive!

If you process, stock, or ship sticky materials, a SYL-OFF coating will benefit you and your customer in time and money saved.

A SYL-OFF Coating Offers These Advantages

- Won't migrate, transfer, or contaminate.
- Doesn't alter papers' features.
- Costs little more, if any, than ordinary anti-adhesives.
- Lasts as long as the stock itself.
- Reduces shipping costs—lighter in weight than conventional coatings.
- Improves water repellency.

* T. M. Dow Corning Corporation



Even the stickiest pressure-sensitive adhesive film without a backing doesn't stick to interleaving packaging sheets coated with a SYL-OFF coating.

Write Dept. 7315 for free samples, full information, list of suppliers on request.

first in
silicones

**Dow Corning
CORPORATION**
MIDLAND, MICHIGAN

World Report

Abstracts from foreign packaging magazines

FRANCE

High-frequency welding for cellulose acetate

New high-frequency equipment for welding cellulose acetate, cellulose triacetate and acetate butyrate is reported by *Emballages*. Cellulose acetate has a fusion point very close to its softening point, the article states, and for this reason has never been satisfactorily sealed on ordinary heat-sealing equipment or by infra-red or impulse sealing. High-frequency equipment for welding polyvinyl chloride effectively has been found unsuitable for cellulose acetate, either because the higher frequencies demand elaborate precautions or because lower frequencies do not yield a satisfactory seal. The new equipment has been designed to prevent "flash-over" and its electrical performance has been engineered to the characteristics of cellulose acetate. Most welds, it is stated, may be obtained in less than a second, thereby achieving a distinct increase in speed over solvent-sealing methods. The equipment does not require an experienced operator. Its initial application has been in the fabrication of plastic boxes.

GERMANY

Self-service outlets increase 56% in one year

Rapid rise of self service in Germany is revealed by statistics cited by Dr. K. H. Henksmeier, manager of Germany's Institute of Self Service, in the British magazine *Packaging*. The estimate is 5,000 self-service shops in West Germany at the end of 1958 in comparison with 3,200 at the end of 1957—a rise of 56% in one year, representing 4% of all German retail outlets. This means, according to Dr. Henksmeier, that 10% of all German food-shop turnover has taken place in self-service stores. He further estimates that there is now a total of 20,000 self-service shops in Western Europe—an impressive figure compared with 10 years ago when there were none.

ENGLAND

Plastic mesh of monofilaments

New kind of netting produced in tubular form from any number of different types of plastic monofilaments is announced in British *Packaging*. The new material, which can be made in a wide variety of mesh formations and spacings, tube diameters, thickness and shape of filaments as well as colors, is suggested for a wide variety of products: fresh fruits and vegetables, protective sleeves on wine and liquor bottles, carpeting, electrical appliances and such confectionery goods as individually wrapped toffees and chocolates. The revolutionary difference between the new netting and ordinary knitted or woven materials is the method of manufacture. Mesh is formed by fusing the intersections of the filaments. The tube form is produced by extruding the plastic net. The basic filament can be made of a large range of thermoplastic materials, including polyethylene, polyvinyl chloride, cellulose acetate, nylon and others. The tubing is available in 1,800-ft. lengths wound on disposable spools or in the form of ready-made bags from 8 to 24 in. long. They can be closed by heat sealing, tape, clips or knotting.

BELGIUM

Cook-in-bag foods in polyethylene-coated paper

Polyethylene-coated paper that withstands boiling temperatures for the production of cook-in-the-bag packages of frozen pre-cooked vegetables is reported in the bulletin of *Institut Belge de l'Emballage*. The article states that the first application

was produced at a packaging cost about one-fifth that of boilable materials comprised of laminated polyethylene-polyester. The secret is in the resin—a polyethylene of medium density, possessing good resistance to heat and the transmission of water vapor. After two years of research with different films and laminations, the material chosen is paper sandwiched between 2-mil polyethylene of 0.935 density. The article does not specify what kind of paper. The construction, it is noted, not only permits heat sealing, but printing of trade and product information on the paper layer.

AUSTRALIA-NEW ZEALAND

Vacuum packaging and gas flushing

Advantages of gas packaging are evaluated in relation to what is termed "atmospheric fatigue" in the *Down Under* packaging publication, *Packaging*. The article deals with this condition in respect to combined materials, such as cellulose film with a polyethylene extrusion coating or saran-cum-polyethylene film after vacuumizing and sealing when the bags are subjected to about 14 lbs. p.s.i. due to the atmosphere. Under these conditions, the article states, the pack may be very "tender" if any strain is imposed on it during handling and distribution. Aggravated stress may cause the film to break, with resultant loss of vacuum. Flushing with an inert gas relieves this state of strain and may often improve package appearance, it is said. Uses of "dry" and "wet" nitrogen as well as various types of vacuum-packaging machines are described.

SWITZERLAND

Permanent packaging exhibition in Zurich

American packagers touring Europe should note that there is a well-established, permanent packaging exhibit in Zurich, sponsored by Percy Wenger, the editor and publisher of *Tura*, the Swiss packaging publication. The address is Beustweg 12, Zurich, and there is no admission charge.

FRANCE

Barrier wrap of impregnated glass-fibre fabric

Suggested for such heavy machine parts as turbine shafts is a tough new barrier material comprised of glass-fibre fabric impregnated to make it impermeable. Used in conjunction with an antioxidant preparation, this material is described in *Emballages* as having many advantages over natural-fibre fabrics hitherto used for such purposes, since the glass fibres reportedly do not provoke corrosion due to their non-porous structure. The material is also extremely tough, as well as tear and abrasion resistant.

THE NETHERLANDS

Web-fed extruded polystyrene cups

A method of blow molding polystyrene cups by the largest producer of paper cups in The Netherlands, using a German system, is described in the Dutch packaging publication, *Verpakking*. By means of an extruder, the polystyrene granules are formed into a web approximately 6 in. wide. When still in plastic condition, this web is fed into a mold, moving downward in a truly vertical direction. By compressed air the sheet is blown into the molds which, after a short cooling time, are lifted. The web travels on and the cups are cut out of the sheet and discharged into a bin. The perforated sheet is recovered at the end of the machine. After passing through a grinding mill, it is mixed with new granules to feed the extruder. The

World Report [Continued]

process is reportedly very economical and in Germany as well as in France these cups are said to be competing in price with the conventional type of paper cups.

BELGIUM

Non-skid treatment of shipping cartons

Four methods of combating the problem of slipping and skidding of corrugated cartons in warehousing and shipping, evaluated in the bulletin of the *Institut Belge de l'Emballage*, indicate high interest in this subject in Europe. Pros and cons are presented for: (1) use of perforations, creping or fluting; (2) application of non-skid coatings; (3) non-skid ingredients incorporated in printing inks and varnishes; (4) spray techniques for containers filled and closed in user's own plant.

ENGLAND

Super-sensitive photocell control

A control unit with a cadmium cell that is not highly sensitive to visible light, but very sensitive to infra-red radiation, is described in *British Packaging News*. The tiny unit, small enough to fit in the palm of the hand, is recommended for precision control in well-lighted places where the more common types of photocell may fail to respond to small changes in the light they are monitoring. Packaging applications include article counting and batching, inspection of filling level and labeling, machinery movement control and automatic weighing control.

DENMARK

More protection for spiritous "akvavit"

New molded-pulp inserts are now being used to give maximum protection against breakage to the famous Danish spiritous beverage, akvavit. As described in the Danish publication *Dansk Emballage Tidende*, ten 10-centilitre flasks are being packed to the box with the new protective inserts for export to all parts of the world.

ITALY

Containerboard with metal, glass or plastic fibres

Containerboard prepared in the pulp stage with a mixture of metallic, glass or cellulose fibres (or a combination thereof) possesses certain characteristics that make it useful over a broad range of packaging applications, says the publication *Notiziario dell'Istituto Italiano Imballaggio*. Board containing metallic fibres, for example, is reported to be an excellent conductor of heat and electricity, to possess magnetic properties and to have a special chemical reactivity. Other mixtures and densities can make the board moisture absorbent or completely impermeable to moisture, the article continues. The type of board claimed to provide optimum absorbent properties, minimum electrical resistivity and most effective heat dispersion is one that includes metallic fibres and synthetic fibrous material, containing 1.84% of aluminum and 16% of plastics.

ENGLAND

Tape sealer for polyethylene and paper bags

A semi-automatic machine for sealing filled polyethylene or paper bags with pressure-sensitive tape is described in *Packaging*. The bag sealer is reported to operate at high speeds and to accommodate bags of up to 56-lb. capacity. It can be adapted to provide a tear-open feature. In operation, the machine feeds a pre-selected length of pressure-sensitive paper tape from a roll to the point of application, where side-by-side crimp rolls secure it smoothly to the bag mouth in saddle fashion. The operator has only to guide the bag (which rests on an adjustable moving carriage) between the crimp rolls. If "tear-tape"

opening is desired, a length of thread can be placed between the bag mouth and the adhesive tape during the sealing operation. In this adaptation, a short length of thread projects beyond one edge of the seal so that it can be grasped easily by the consumer. The tape seal then can be torn open along its length or any part of its length, for either fast or slow pouring of bag contents, as desired by the consumer.

ENGLAND

Two-cans-in-one offer point-of-use convenience

Interesting to packagers of products which must be mixed with a companion ingredient only at the time of use is a two-section metal can adopted by Industrial Chemical Industries for its Permobel brand paint. As described in the British magazine *Packaging Review*, the convenient dual pack consists of two separate, sealed cylindrical metal cans of exactly the same diameter, sold as a single unit. The top screw-capped section, which holds the paint finish, has an interior-threaded circular recess in its bottom wall. The lower section, about one-fourth as tall, contains the activating ingredient. Its closure is a threaded screw cap that in turn is screwed into the threaded recess in the bottom of the finish container. Thus joined, the two cans reportedly cannot be separated in normal handling until ready for use, at which time the ingredient in the lower can is mixed into the contents of the larger container.

BELGIUM

Polyethylene film "so tenuous it floats on air"

A resin has been developed which permits production of polyethylene films so tenuous they float in the air like cobwebs, according to the bulletin of *Institut Belge de l'Emballage*. The article discusses the announcement of four new film materials made from low-, medium- and high-density polyethylenes offered at prices equal to or less than standard polyethylenes. About the "cobwebby" polyethylene, the article says: "There does not seem to be any practical application for this material so far—though doubtless it is the long-awaited answer to someone's dream."

ENGLAND

Low-cost tubes of polyvinyl chloride

By means of a process developed in France, a British firm is making tubes of polyvinyl chloride with body and head combined in one-piece construction at considerably lower cost than other types of metal or plastic tubes, according to *Packaging News* (England). The extrusion operation reportedly produces a tubular body of controlled wall thickness and molding methods to form the shoulder and nozzle. Nozzles and screw heads may be shaped to accommodate any style urea, polyethylene and PVC caps. Tubes are recommended without linings for non-food items and can be lined with non-toxic polyvinylidene chloride for foods. There are also linings to provide odor and water-vapor barriers. Lacquers can be applied for added protection. Sizes range from 5 to 250 cc. and the tubes can be printed in three colors.

FRANCE

Foamed polystyrene as container-insulating material

Fabricated into containers and a wide range of shaped and molded blocks, slabs, disks and rings, foamed polystyrene is discussed for its properties as a thermal insulating material in *Emballages*. Each of the containers is documented in relation to the particular needs of a commodity—such as effectiveness for bulk transport of ice cream. By molding an entire lining as a monobloc, the article states, it is possible to obtain a degree of insulation hitherto unknown, together with reduction in over-all size and weight. The system of closing adopted for these containers to obtain maximum insulating value at this critical point is explained.

For additional information on any item, write: World Report Editor, MODERN PACKAGING, 575 Madison Ave., New York 22.

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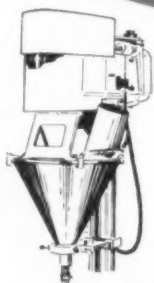
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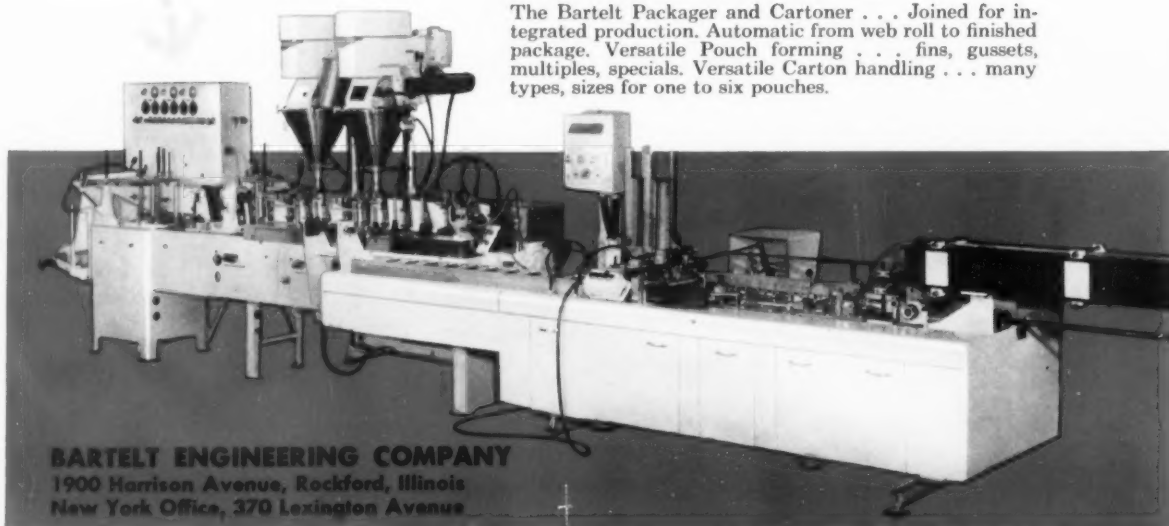


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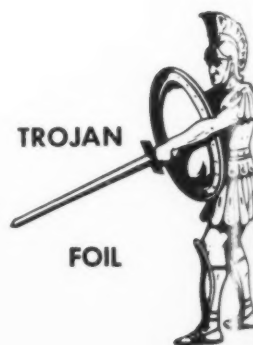


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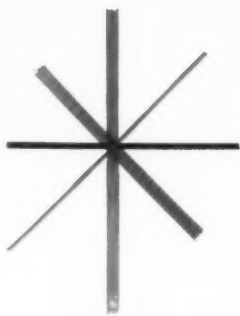


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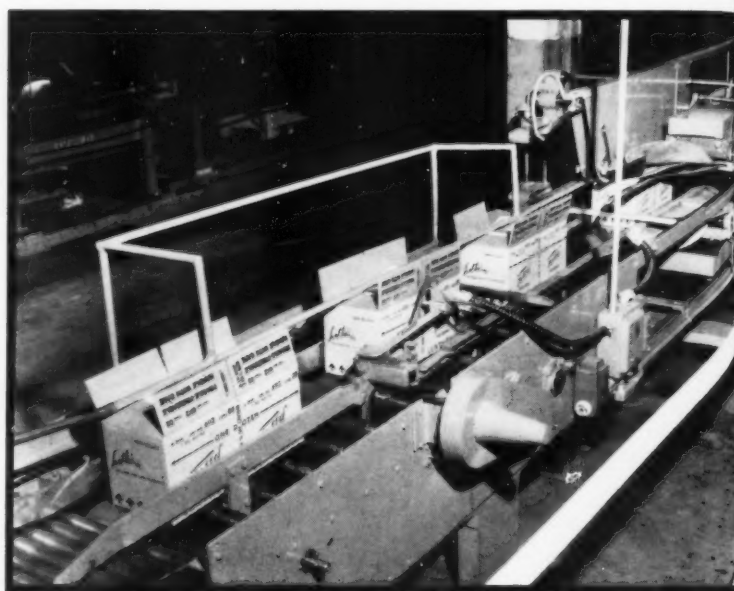


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Packomatic's Model D Case Sealer is here adapted to sealing new Helene Curtis "split-case shipper". A simple retainer rail added to a standard Model D Gluer to hold top inner flaps in correct glue position until case traveled under top spine of glue unit. 24-bottle shipping case, consists of two independent (fully flapped) 12 bottle cases joined at their centers. The case snaps in two to permit filling a 12-bottle order, without breakage hazards present removing 12 bottles from a standard 24 bottle case.

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U.S.I. POLYETHYLENE NEWS

A series for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

Packaging Notes

New bread-wrap material is a sulphite sheet with an inner coating of polyethylene. The outer surface has a high gloss finish coating. The extruded poly inner surface provides an excellent air-moisture barrier. The sheet withstands the relatively high temperatures of wrapping hot bread and reportedly performs well on existing wrapping machinery.

Clear polyethylene containers are now being used to market photographic and light-sensitive materials, according to a recent announcement. Lightweight, unbreakable and chemically resistant, the containers provide light protection but still allow the user to see the contents. Polyethylene's flexibility is said to be another advantage: Air can be removed and oxidation of the contents prevented by squeezing the bottle and replacing the cap to form a vacuum container.

Poly film and poly-coated corrugated board are combined in a new type of package. The packaged item is encased in vacuum-forming in tight fitting film which is bonded to the mounting board. The board is folded along scored lines and inserted into an outer sleeve of corrugated board for shipping. The method is said to be suitable for a wide variety of packaging applications, ranging from costly, fragile industrial parts to volume-marketed consumer products.

A new adhesive for laminating polyethylene to burlap and other fabrics has been developed. It is expected to be helpful to bag makers and shoe manufacturers seeking to laminate polyethylene with a wet adhesive instead of heat sealing. The adhesive is said to be particularly useful in the manufacture of bags used for fertilizer and feeds.

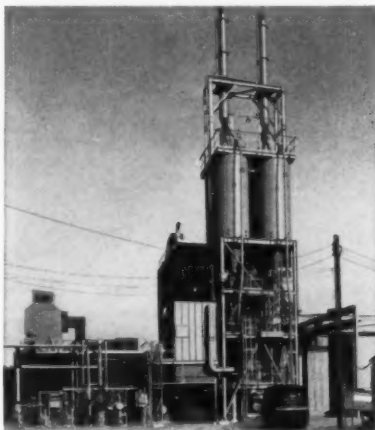
Machine which sets up tuck lid, poly-coated, bleached sulfate boxes and trays reportedly can produce up to 3000 units per hour. The machine heat-seals the box corners on the inside, leaving the exterior smooth and flat. Boxes and trays made by the machine are being used to package frozen foods, bakery products, candy, fresh foods and industrial parts.

A new polyethylene bottle with a rotating sleeve, also of polyethylene, has been designed to solve the problem of labeling. A horizontal channel for the sleeve is molded around the outside of the bottle. A paper label can be inserted in a vertical opening in the sleeve which is then rotated to cover the label. Inside the channel and protected by the sleeve, the label cannot fall off or be damaged by splashing liquids.

U.S.I. Starts Up New Plant at Tuscola For Compounding Petrothene® Resins

To Process 25 Million Lbs. of Resin Per Year

A new plant for compounding polyethylene resins with carbon black and other additives has been opened by U.S.I. at its petrochemical complex at Tuscola, Ill. The plant, which will handle 25 million pounds of resin a year, enables U.S.I. to assure its resin customers of even higher quality control than previously.



U.S.I.'s new polyethylene resin compounding plant at Tuscola, Ill., will handle 25 million pounds of resin a year.

Booklet Lists U.S.I. Resins For Wire, Cable Industry

U.S.I. has issued a four-page booklet classifying the special physical and electrical properties of PETROTHENE polyethylene resins. The booklet lists resins by application, essential properties, and industry specifications. Copies may be obtained by writing to Editor, U.S.I. Polyethylene News, U.S. Industrial Chemicals Co., 99 Park Avenue, New York 16, N. Y.

U.S.I. To Show Cast Film at Packaging Show

Ultra-clear cast film, printed film and other special packaging films will be featured in U.S.I.'s exhibit at the 28th AMA National Packaging Show in the Chicago International Amphitheatre, April 13-16. A team of technical service engineers will also be on hand at the U.S.I. booth (booth No. 1133-1135) to answer questions on packaging applications of films made from PETROTHENE polyethylene resins.

In polyethylene pipe and electrical applications, the care with which carbon black is compounded with the resin has an important effect on the weather resistance of the finished product.

Weather resistance of a polyethylene compound depends on three factors: (1) type and particle size of carbon black; (2) percentage of carbon black in the compound; (3) dispersion of the carbon black in the compound.

Dispersion is particularly important. Tests show that good dispersion will enable polyethylene to withstand 15 to 20 times as much exposure as polyethylene with poorly dispersed carbon black.

At U.S.I.'s new compounding plant, only the finest channel black is employed in compounding the wire and cable grades of PETROTHENE resins. Concentration is set at a point which yields the optimum balance of light screening and other properties. Special processing equipment insures thorough dispersion.

Users of black electrical grade polyethylene can get technical data on PETROTHENE resins expressly formulated for electrical applications by contacting their nearest U.S.I. office.

Injection-Mold Poly Tanks With 31-Gallon Capacity

Polyethylene tanks with a capacity of 31 gallons are now being injection-molded for use as salt storage containers for automatic water softeners. The 100-ounce tanks are believed to be among the largest deep-draft parts ever produced by the injection process.

The poly brine tanks measure 21 inches deep, with a maximum diameter of 21 inches. Designed with a two degree draft, they may be nested for economical shipment and storage. The tanks are molded on a specially modified 200-ounce injection machine which operates on a molding cycle of better than 20 shots per hour. The corrosion-resistant, dent-proof polyethylene tanks replace galvanized steel containers formerly used for this application.

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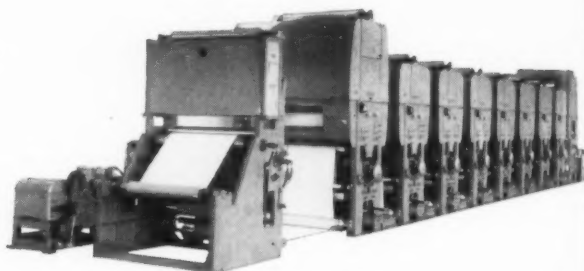
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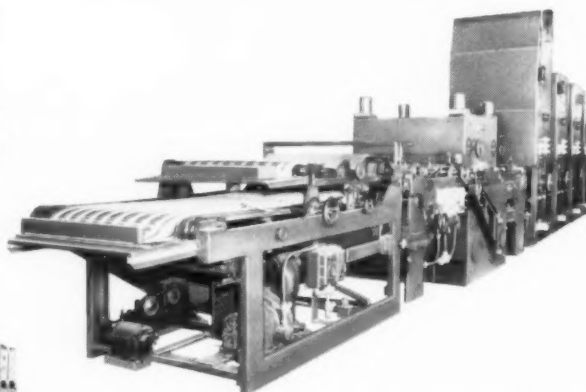
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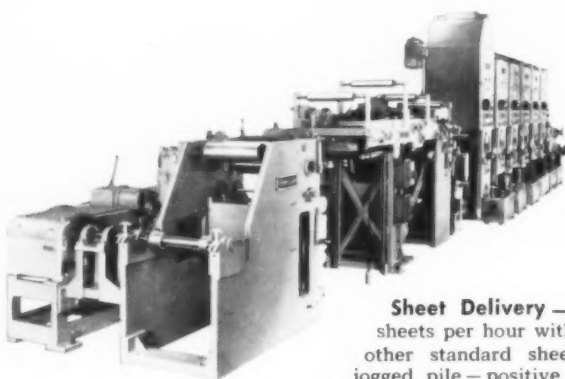
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Cutting & Creasing Press — cuts, creases, and automatically strips cartons from roll stock in one pass through the press—speeds up to 200 impressions per minute—precise cut-to-print register—minimum set-up time. Illustrated with alternator and double belt delivery to sort reverse-interlocked carton blanks.



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Editorial Memo

Toward coordinated packaging

Something important—and significant—is currently happening to the management of packaging.

The idea that good packaging is an amalgamation of the best talents of sales, advertising, production and research departments is stronger than ever. But there seems to be a trend away from the original idea of the packaging committee, in which these four interests were put in a room together, on occasion, to hammer out a packaging decision, while being left in the meantime to go their own uncoordinated ways.

The trend is toward (1) centralization of control in a full-time coordinator of packaging and (2) a better balance of knowledge and understanding in each of the four interested departments.

The idea of investing decision-making authority in a single full-time packaging executive is a sound one. The idea is working well at such companies as H. J. Heinz, Procter & Gamble and General Electric. Too often in the past, with the loosely knit committee system, the decision has taken one of two undesirable courses: either it has gone the way of the one department able to shout loudest and longest, or it has been arbitrarily made by a management man with only a remote knowledge of the many facets of packaging.

Even more important, perhaps, than the single-coordinator concept is the demand for broader knowledge and understanding among the specialists who work with him. The ultimate package, like a chain, is only as good as its weakest component. It may be loaded with sales-promotional and advertising value—yet will fail in the end if research has not set a high protection and performance standard. It may be good in all other respects, yet fail if it is beyond the limits of economical production.

The balanced package comes from balanced viewpoints.

We were impressed, at the last meeting of the packaging curriculum advisory committee at Michigan State University, to hear technical directors from two of America's largest package-using companies stand up for the balanced curriculum rather than specialized training for the graduates they would hope to hire.

They said, in effect: "We want technical men, yes. But the highest value is in a technical man who also has some knowledge of marketing and sales, as it is in marketing and sales personnel who have some technical training. The time is past when these groups can go their own ways. We must learn to live with each other's problems."

In such thinking, we believe, lies the best future of packaging.

The editors



World Report, our new monthly digest of significant packaging developments reported in leading foreign packaging publications, has had an immediate, gratifying response from our readers. It demonstrates the obvious: neither national boundaries nor oceans are barriers to useful ideas. Just as non-Americans thirst for new and different creations from the States, so our readers are intrigued by new foreign packages, techniques and materials that we highlight in these abstracts from abroad. More than 20 foreign publications are translated and digested monthly. For this month's *World Report*, turn to page 59.

Modern Packaging
Executive and Editorial Offices
575 Madison Avenue
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PAPER NEEDS THE TOUCH OF TALENT

Early German books
were hand made by
skilled craftsmen
using the best
materials and
considerable skill.



But it took the talent
of an Albrecht Dürer
to convert mere paper
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New aspects of multipacking

Thanks to new constructions and new machines, which offer either flexibility or single-purpose high speed at lower cost, the practice is spreading far from its original objective

The multipack—fulfilling many predictions made for it during the past few years*—is scoring striking gains in a host of new packaging areas, pushing multiple sale of products that now range from flashlight batteries, detergents and cleansers to table tumblers, ice-cream bars and motor oil.

As a result of major developments in machine and carton designs during the past two years, these significant advances can be observed:

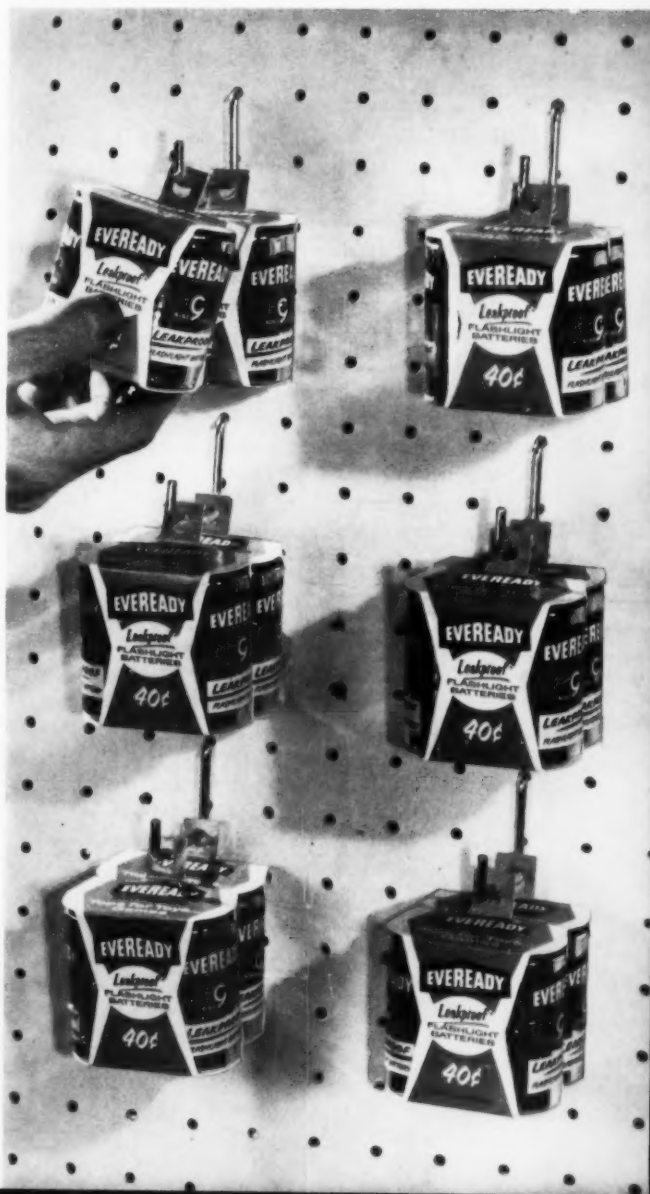
1. Consumption of multipack containers rose to nearly a billion units in 1958—an estimated increase of more than 100 million in two years, of which more than half represents new applications, principally for citrus products and in such nonfood areas as hardware, toiletries, cosmetics, cleansers and detergents.

2. Increasingly ingenious package constructions enable wrap-around containers to fit diverse package shapes and sizes ranging from aerosols to rectangular cartons. It is possible now to combine different sizes and shapes of containers in the same multipack, as in recent deal packaging of detergents and cleansers.

3. Multipackaging's use in distributor channels has been broadened with the multi-unit grouping of such products as aerosol shaving creams in func-

*See "Bright Outlook for Multipacks," MODERN PACKAGING, Feb., 1957, p. 73.

Hang-up multipack for batteries introduces a new principle in multipacking. The die-cut punched tab can be folded back into the carton for standard display. The batteries are held in place by ingenious folding flaps that extend both down and up at the sides of the package. Multipack by Lengsfeld Bros., Inc.





Deal packaging with standard machines flexible enough to handle automatically many different container sizes and shapes is a growing trend. Shown are a twin-pack for aerosols (upper left); three-pack for two sizes of fibre cans (lower left); canned liquid detergents put up in conventional style (upper right) and in die-cut multipack (lower right) that gives full visibility to one can. Aero Shave package by Continental Can Co.; others by Mead-Atlanta Paper Co.



Multipacks for glass have progressed from the semi-enclosed and heavy paperboard folder for jellies (left) to the light and fully visible package for tumblers (right). Though fragile in appearance, the latter has structural rigidity and contains internal flaps for further cushioning. Packages by Diamond-Gardner Corp.

tional dealer containers that never appear on the retail shelf, but that reduce packaging and shipping costs and cut the time needed for assembly and price marking of less-than-case orders.

4. New, flexible, medium-speed machines are handling many more types and sizes of containers. This standard packaging equipment is reducing the cost of deal packaging and obviating the need for custom-built units in multipacking household toiletry and cosmetic products.

5. High-speed machines are now in action that in only one year have doubled maximum output to as much as 1,200 single cans per minute; this equipment now makes multipacking feasible for such big-volume operations as frozen citrus concentrates.

Background

The cost of multipacking is, of course, tied closely to the intricacy of the package and of the machine that sets it up. But in most of the examples cited in this article, multipacking costs have gone down because of higher machine speeds and the development of more efficient cartons. The multipacks discussed here range in price from 1 cent each for the simplest to 2.5 cents for the most elaborate.

With the improvements in both the package and the machines that apply it, packagers and suppliers have been studying the most effective ways to apply this merchandising device. Two significant research reports on canned foods have just been released:

1. A study by the National Canners Assn.—the Philadelphia Project—in cooperation with Ameri-

can Stores Co. and Container Corp. of America.

2. A test made in two supermarket chains—Chatham (Detroit) and Tedeschi (Boston)—sponsored by *Food Topics* magazine with the assistance of the Mead-Atlanta Paper Co., Atlanta.

In the Philadelphia Project, multipacked and single products were not restricted to one brand and were not given any special promotion; in the second experiment, multipacks and single containers of any given product were uniformly branded and given special floor display and advertising.

However, both tests seem to prove that in many cases a sharp upsurge in sales, sometimes reaching a net gain of 58%, can be credited to the multipack alone.

Packagers are preparing to capitalize further on these findings and the new developments in multipacking. New applications ranging from one-trip single- and two-piece soft-drink carriers to intricate but functional deal packages for cosmetics, toiletries and household products are just around the corner.

Containers fitting the single-trip multiple package description totaled 924,000,000 units in 1958. This specifically excludes re-usable carry cartons for soft-drink and, of course, beer bottles. Much of the growth in the annual figure has been due to the increase in canned beer, which is estimated to take 31% of the output. Such canned foods as fruits, vegetables, soups and milk use another 9% and constitute a growing area of application. Dog food now runs to 2% of the total. Canned soft drinks, which are just getting started, account for about 1%.



Looks like a folding carton, yet this is a multipack for six Eskimo Pie ice-cream bars. The paperboard blank is wrapped around the bars after they have been assembled and the package is closed with locking tabs. Solid bleached sulphate board is used for this multipack. Mead Atlanta Paper Co.



Distributor packs save packaging and handling costs for both the user and his distributors. Here are two styles, both for aerosols. The straight-line pack (foreground) has die cuts and perforations for fast separation during order assembly. Both replace folding cartons or separators. Aero Shave package by Continental Can Co.; Gillette carton by Mead-Atlanta Paper Co.

The remaining 7%—though it looks small as a percentage—amounts to nearly 65,000,000 containers and represents the promising new applications in multipackaging. Cleansers and detergents, now taking 3% of the annual total, are mostly special deal packages that can be put up economically on fast, flexible multipack equipment. Orange concentrate processors utilized only 1% last year. It is reported, however, that but for the freeze in Florida, this industry would have used millions of multipackages to move its highly competitive product. The remaining 3% is split among a wide range of multipackaged products—aerosols, bottles, jars and cans for many food and nonfood items, hardware and kitchen products and the distributor multipacks—which are used at present only for two aerosol products, but are expected to spread rapidly to many toiletry and cosmetic applications.

For the purposes of this article, we are considering only multipacks which are formed by a wrap-around construction of paperboard. There are in existence, of course, many other types of multipacks using bags and tapes.

Package developments

Though they have been on the market less than two years, perforated tear strips that ease opening of the tight multipacks are winning high favor. They are in use on A&P's canned-milk pack and on six-packs for canned beer. A special carton for ice-cream bars also has a tear opener.

Ingenious package constructions have been devel-

oped recently for screw-top cans, aerosol containers and glass packages. Most of them allow screw-top containers to protrude through the tops of the multipackages for price marking, though there are styles available for full enclosure. One deal pack adopted recently by Procter & Gamble for two sizes of Joy detergent has the front of the multipack cut away to show the entire height of the lithographed label on the front of the larger can, while the smaller can is fully enclosed. Another for P&G's Comet cleanser combines three cans of two different sizes. The shorter center can is held in place by an ingenious folding flap.

The idea of re-using the board in the multipack to provide a child's toy is an intriguing departure.

B. T. Babbitt, Inc. has a twin-pack container for Bab-O cleanser that is printed inside and out. When cut out and mounted on an empty Bab-O can, the inside design makes a model locomotive. By extending the normal glue flap, a fifth panel was created to provide enough board for the printed parts.

A similar re-use package, now being market tested by Beech-Nut Lifesavers, Inc., is a cubical multipack (for four jars of baby food) that becomes a child's toy block when emptied. Colorfully printed on three sides in an alphabet motif with company identification restricted to the front and back, this folding and locking-tab carton contains a corrugated divider that gives protection to the cans and jars and adds rigidity to the block.

A significant new concept in multipacking is the idea of applying designs and machines to small

items *solely* to increase the unit of sale—where convenience of carrying is no consideration.

A prime example of the latter new technique is National Carbon Co.'s twin-pack of Eveready flashlight batteries. A single piece of printed paperboard with a series of folded tabs clips two batteries together. A die-cut tab in back pulls out as a perforated hang tag so that the package can hang on wire rack or pegboard hooks, also a new multipack idea.

The question of what kind of multipack a packager should use depends largely on what type of product he is packing, the shipping and handling conditions it must endure and what performance the packager expects of the unit in the store.

Such relatively heavy products as beer and frozen orange juice need multipackages with good structural strength to permit high stacking on the supermarket floor and, in the latter case, to resist moisture in the frozen-food cabinet. Thus these heavy-gauge multipacks frequently contain full center partitions or die-cut and folded tabs to add rigidity. These packages are exemplified by the Knicker-

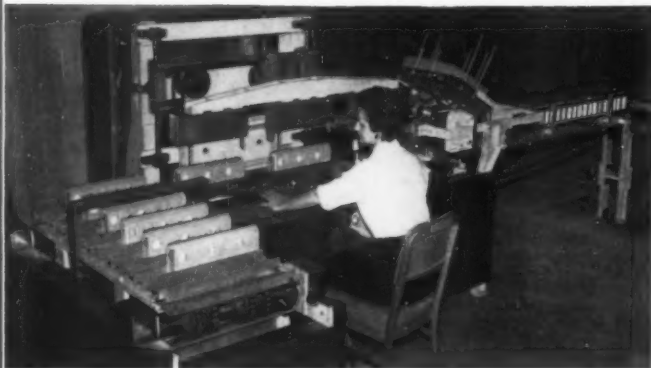
bocker beer pack, which has tab partitions, and a pack for Bib orange juice with a full partition.

The paperboard and printing techniques used in retail multipacks have been improved enormously in the past few years. Most multipackages are formed from 20- to 25-pt. patent-coated newsback, bleached, Manila-lined bending chip or natural kraft sheet, but solid bleached sulphate board has recently appeared in the Eveready pack and in an unusual multipack for Eskimo Pie ice-cream bars.

Machine developments

One of the prime reasons for the expansion in multipackaging has been the rapid development of both high-speed single-purpose and highly flexible machinery for setting up and filling the blanks. Fortunately for packagers, selection of equipment is not complicated because most of the machines are supplied by the manufacturers of patented cartons and operate specifically on only one type of package structure.

But several machinery firms now produce general



Multipacker from cartoner.
Using standard cartoning methods, a continuous-motion machine (far background) sets up six-pack blanks and slides cans in from the end. Anheuser-Busch runs this line at 430 cans per minute, though the machine has a potential of nearly 1,000 cans per minute. To complete the mechanization, a semi-automatic caser (in the foreground) puts four six-packs in a shipper. Both machines by R. A. Jones & Co., Inc.



New principles in m

Flexibility at medium speeds up to 70 multipacks per minute is built into this straight-line packager that can handle aerosol, screw-top or cone-top cans, bottles, jars or even folding cartons in single- or double-line packs. The unit is reportedly so simple in construction that it can be changed over in about a half hour. Container Corp. of America.

multipackaging machines for which packagers can obtain cartons from independent suppliers.

In the wide range of machines now available, several almost universal improvements stand out:

1. Machine speeds for standard container sizes and packs have jumped dramatically. There is at least one model that can put up 6-oz. cans in a six-pack at 1,200 cans per minute and there are several machines that can now handle beer containers at speeds of 600 to 1,000 per minute.

2. Flexibility in handling container sizes and complex multipack constructions has been built into new medium-speed multipackaging machines offered by several suppliers. It is this equipment that has made possible deal packaging of containers whose shapes vary from the simple cylinder. Speed of these machines runs up to 70 cartons per minute, generally considered fast enough for such applications.

3. Mechanical actions in most multipackaging equipment have been greatly simplified. In some machines the only moving parts are the carton-feed mechanism and conveyor chains plus a single eccen-

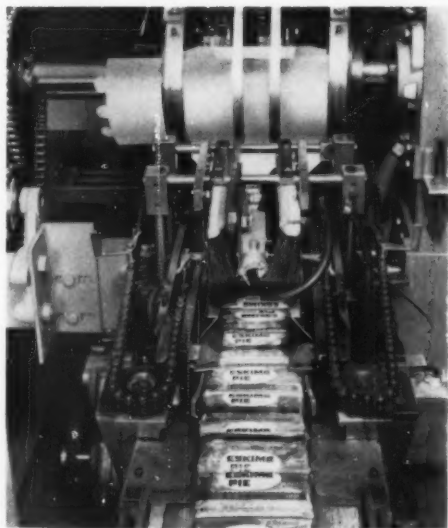
tric to tuck in the locking flaps. The cartons slide under the grouped cans and are bent into position by stationary plows in a smooth, continuous motion.

4. Machines tend to be more compact, particularly those with compression sections for glue-flap multipackages. Faster-setting adhesives are part of the answer. Also, machine makers have added such ingenious mechanical devices as vertical compression sections and reverse blank-feed action to shorten the equipment and conserve floor space.

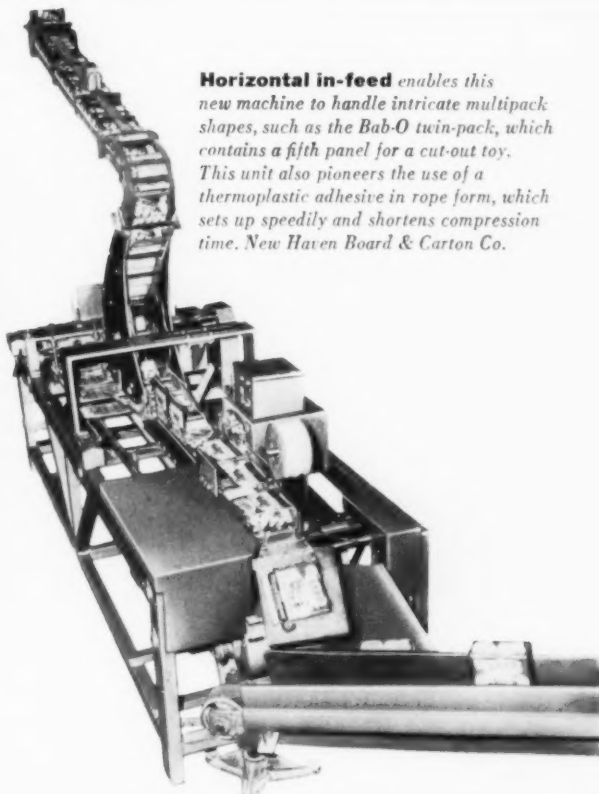
Other developments are interesting because of increased flexibility in multipackaging applications. Several machines now feed the carton blanks over the tops of the containers, bending them down around the containers, and locking or gluing the flaps underneath. It is this action that has made possible machine packaging of bottles, cone-top and screw-top cans, and aerosol containers.

In some equipment, intermittent motion has been replaced by smooth, continuous flow. One modified cartoning machine, for instance, forms multipackages from blanks and slides flat-top cans in from

in multipacking machinery



Cartoner from multipacker? Developed to assemble rectangular packages and enclose them in a full-flap multipack with locking tabs, this machine, which produces the Eskimo Pie six-pack, may well find further use among many companies in the general cartoning field. Machine by Mead-Atlanta Paper Co.



Horizontal in-feed enables this new machine to handle intricate multipack shapes, such as the Bab-O twin-pack, which contains a fifth panel for a cut-out toy. This unit also pioneers the use of a thermoplastic adhesive in rope form, which sets up speedily and shortens compression time. New Haven Board & Carton Co.



Convenience in opening is provided by simple and functional tear-strip panels in these two six-can multipacks. *White House* milk pack by Continental Can Co.; *Knickerbocker* beer pack by Lord Baltimore Press.



the side by means of a barrel loader at speeds up to 1,000 cans per minute. Another achieves its continuous motion by timing the cans in through screw feeds. The blank is bent upward around the containers and locked at a speed of 800 cans per minute.

A specialized unit, designed for small juice-concentrate cans, works vertically. It opens pre-glued cartons, which are then elevated and filled with six 6-oz. cans from sprocket wheels—four from one side, two from the other—at 1,200 a minute.

Another machine specifically designed for glass containers and used now for both Anchor Hocking table tumblers and Kroger's tumbler-packed jellies uses this vertical action to save floor space. The blank is folded around the glass jars in a horizontal movement and the glue flap is set in a vertical compression section.

Perhaps the shortest compression section of all is achieved in a new multipacker, now used for Bab-O, that employs a leaf spring held down by a single, 1-in. ball bearing. This unit applies a solid "rope" adhesive and rolls in the containers horizontally from an overhead conveyor.

The new machine that forms a fully enclosed multipackage for Eskimo pies—and which could be applied to almost any rectangular container—differs from standard cartoning machines in that it assembles the packaged product first, wraps up to six in the blank and locks the tabs at 900 a minute.

On the new machines designed for application to different types of containers, speed of change-over is vital. Several years ago, most multipackers either could not be changed over to a different container size or required expensive change parts and considerable down time. One compact new multipackager will handle flat and cone-top cans, aerosols or bottles in single- or double-file multipackages and is said to convert from one to another in less than an hour with the use of a "C" clamp, an Allen wrench and an adjustable wrench.

All of these developments add up to the fact that tools and packages for multipacking almost any combination of unit containers at any desired line speed are now available. The wealth of new applications and the many more that will be on the market in a matter of months show that packagers are not slow to adopt these advanced techniques and that multipacking will undoubtedly show even greater growth during the next few years.

Re-usable multipackage that can be cut out to form a toy locomotive is accomplished by printing both sides of the package blank and extending the normal glue flap to form a fifth panel that is part of the toy. *New Haven Board & Carton Co.*

Pocket pack that counts

By finger pressure, upper chamber of Anabolic's film pouch is reloaded as reminder of daily vitamin quota.

Multiple filling cuts cost in half

For the user of vitamin tablets who needs to be reminded of his daily quota, a novel new two-compartment pouch package offers the built-in convenience of a separate "memory" chamber for one day's requirements. Simple thumb pressure at a designated point on the film package loads the top compartment with enough tablets for the day, drawing them from the week's supply in the lower chamber. A second device permits dispensing one at a time from the top.

Of prime importance to the packager is the fact that the film pouch is less than one-half as costly as the conventional strip-type daily pack because less film is used per tablet and more tablets are dropped per machine cycle. Since many of the new packages are expected to be sold individually, there is a further saving in printed cartons.

This cellophane pouch for pocket or purse is used in large volume by Anabolic Foods, Inc., Glendale,

Calif., for a vitamin formula requiring use of four tablets a day. It's all done with heat sealing.

A constricted internal opening from the main pouch pocket into the separate top compartment is marked with lines and arrows to direct the user in squeezing four tablets into a horizontal row in the upper chamber. Here, four small windows show how many tablets have been consumed each day. Tablets in the main pouch are also visible.

The pouch is formed from a single web of reverse-printed No. 300 MSA cellophane, extrusion coated with 2 mils of polyethylene to increase the strength and barrier properties. The patented package is made on a special automatic machine—designed and built by Anabolic's contract packager—that turns out 70 pouches per minute.

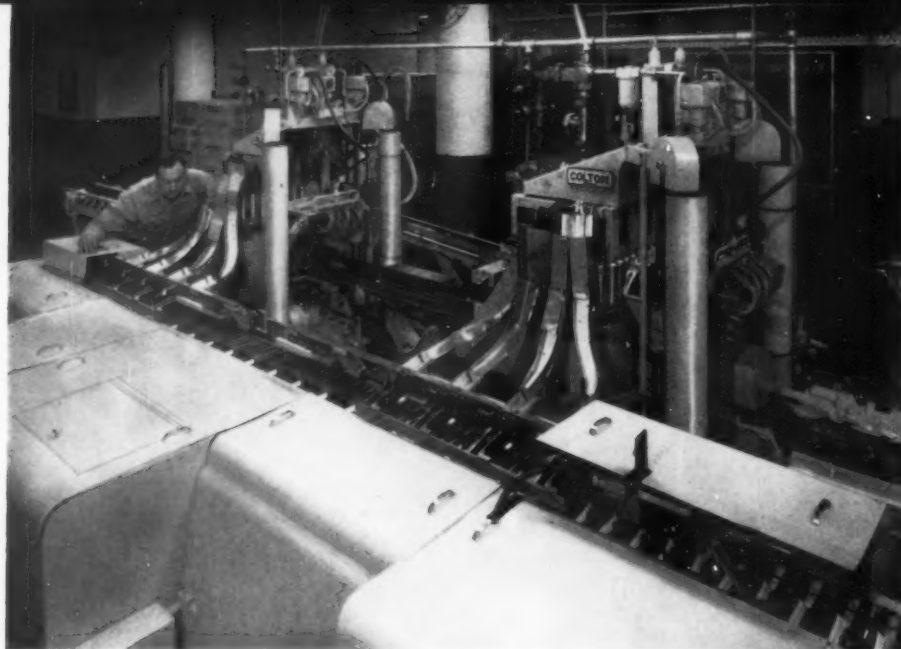
The machine first folds the film around two mandrels. Sealing heads then close around the mandrel, simultaneously forming the end seals, one side seal and a skip seal just above the center of the package that creates the two compartments. Next, two charges of tablets—24 for the main compartment, four for the upper one—are dropped through the mandrels and the remaining side is sealed.

Four pouches are enclosed in a conventional folding carton holding a full month's supply.

SUPPLIES AND SERVICES: Contract packaging of "Memory Pak" pouches by The William Steven Co., 2520 San Fernando Rd., Los Angeles 65, using polyethylene-coated cellophane supplied by Standard Packaging Corp., 200 E. 42 St., New York 17.

Squeezed into place by thumb pressure applied at designated point, daily dose of four vitamin tablets is placed in four-tablet windowed section of new pouch package. With corner snipped off, it has restricted opening to dispense individual tablets. Each pack holds a week's supply; the carton, enough for one month.





Tandem hitch between fillers and bucketed cartoner-conveyor is through chutes, which lead four tubes from each machine to special shuttle that travels with conveyor and deposits containers in every other bucket. Rubber trailer that turns tubes flat and no-tube alarm are in the right foreground.

A torrent of toothpaste

Colgate's new line, employing advanced mechanical features,

fills, cartons and bundles tubes

at 300 per minute with minimum motion, maximum smoothness

Tube filling, cartoning and bundling equipment has reached a new peak of mechanical efficiency on a high-speed line for packaging toothpaste, now in operation at the Jersey City plant of the Colgate-Palmolive Co.

Built around a new high-speed cartoner that utilizes the proven advantages of rotary action for smooth-volume output, the 300-units-per-minute straight-line operation includes tandem tube fillers and a bundler that are said to match the cartoner in trouble-free operation. Maximum production rate achieved on this line, which is designed for the "large" (1 $\frac{3}{4}$ oz.) tubes, is 66% higher than on previous toothpaste lines at this topnotch plant. Using one less operator, the line boasts a net gain of 122% in output per manhour.

Advanced mechanical features—significant to all packagers interested in cartoning or tube filling—are these:

1. An improvement in power-transmission and package-handling mechanisms that reportedly en-

ables the cartoner alone to run up to 500 cartons per minute. The simple and rugged components are designed to minimize motion and thus reduce wear and maintenance.

2. A compact arrangement of tube uncasing, indexing, cleaning, filling and sealing mechanisms into such a small unit that two machines—each rated at 150 tubes per minute—take up only a little more space than one previous 180-per-minute model. And though the twin machines are synchronized through a common drive originating in the cartoner, either machine may be disengaged for servicing without shutting down the whole line.

The efficiency achieved at each step in Colgate-Palmolive's operation is remarkable.

Cartoning action

Because the filled tubes are discharged by intermittent action four at a time from each filler and tend to "hang up" momentarily, a special shuttle mechanism has been devised to index the tubes into

a continuous bucket conveyor on the cartoner and so maintain perfect timing and smooth machine action. The shuttle catches the four tubes from each machine on a receiver plate located over the continuous cartoner-conveyor. The shuttle travels along with the carton conveyor for a few inches, sweeping the eight tubes from the plate and dropping them into buckets on the cartoner-conveyor. Spacing on the shuttle insures that every bucket in the conveyor is filled in order to obtain full output. Should one filler stop, a detector on the cartoner-conveyor prevents carton feed for the empty pockets and also rings an alarm.

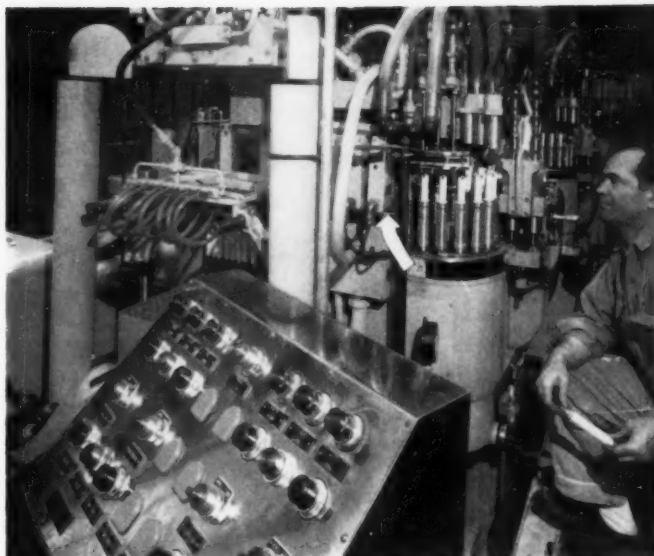
A company-installed rubber trailer, mounted over the conveyor, turns all tubes so that they lie flat in the buckets. A reciprocating blade—mounted on a carton set-up finger for simple synchronization—serves as a double safeguard against tubes being cocked in the bucket when the cartoning rams engage them.

Unlike conventional cartoners, this machine employs rotary action to smooth mechanical action and enables the unit to operate at high speed. The cartons are pulled down from the feed hopper by vacuum cups into buckets on the periphery of a rotating head that revolves in the vertical plane. Cartons are opened by a squeezing action between the head and a guide on the machine frame. The side flaps are broken open by a single reciprocating finger and a stationary plow—a minimum of moving parts. As cartons are discharged from the head, the tubes are slid into place by cam-operated rams. End flaps are closed by conventional plows and folders, and the carton is closed by a parallel crank tucker mechanism.

While not brand new machines, the twin fillers have unique features, which make them particularly suitable for this high-speed line. These units are located at one end of the line over a supply conveyor for empty metal tubes. Removed from their shipping cases in alternate rows by expanding collets, mounted on an elevator, that grip the inside of each tube, the containers are raised four at a time and placed in holders on an oval track and then "paneled"—aligned with the printed faces parallel to the anticipated bottom seal—by a combination of four electric eyes and small electric clutches and brakes which are connected with other expanding collets.

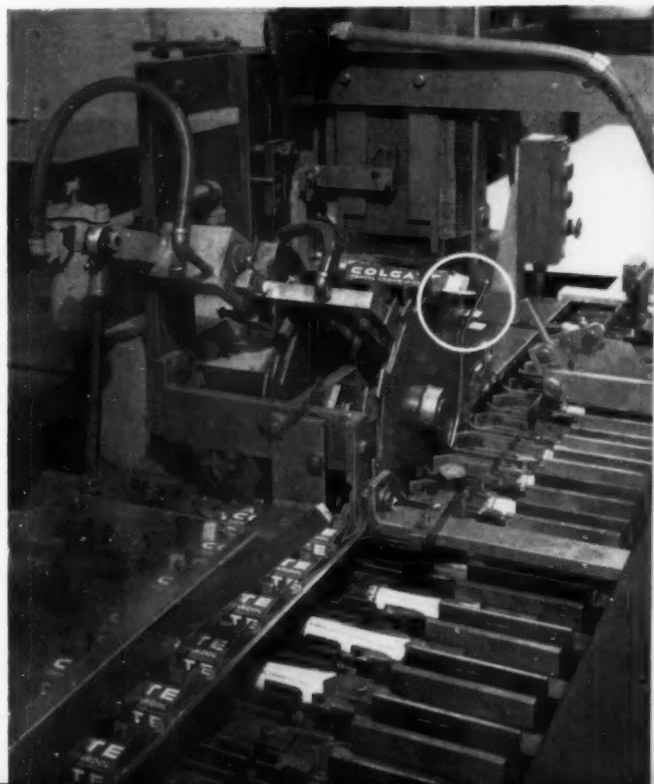
This compact device combines the speed of electronic registration with fast-acting rotary mechanical elements. It is one [Continued on page 159]

SUPPLIES AND SERVICES: Fillers by Arthur Colton Co., 3400 E. Lafayette Ave., Detroit 7. Cartoner by F. B. Redington Co., Bellwood, Ill. Bundler by Scandia Packaging Machinery Co., North Arlington, N. J.



Compact automatic fillers raise empty tubes from shipping cases by means of expanding collets on chain-driven elevator (left, beyond control panel). Tubes are indexed for proper closure by a combination of electric clutch-and-break assemblies and photo-eyes (arrow). Cleaning, filling and sealing follow on the far side of each oval track.

Rotary head on cartoning mechanism, a new principle, opens cartons at high speed. After each carton is fed from overhead hopper, curved wire arm breaks tuck flap against face of wheel (circle). Plows and a reciprocating arm (right) break other flaps. Blade on off-side of arm and suspended brush (center) control tubes, keep them flat for loading rams.





Completely transparent section of stretch-formed film holds product within card as though suspended in air. Retractable film shrinks tightly around bottle, tending to disappear optically in favor of product. Side view (photo at right) shows how product is encased between doubled-over film, which is electronically heat sealed around the periphery. Package may be hung up or will stand by itself, the bottle providing base.

See-through card pack

Cutex demonstrates intriguing new approach to blister packaging in which vinyl film in die-cut folder is stretched around product to hold and display it from all angles; savings up to 30% expected

A new type of see-through pack, combining stretchable vinyl film with paperboard, presents a radically different structural approach to the blister and skin-packaging idea that promises some significant advantages and economies wherever it can be applied.

First on the market with the new package is Northam Warren Corp., Stamford, Conn., for Cutex Mira-Base nail preparation.

The development suggests not only a significant new potential for volume use of vinyl film in packaging, but a new and intriguing way of carding toi-

lety and cosmetic items, hardware, toys, jewelry and numerous other items for which blister and skin packaging has proven such a stimulant.

The new Cutex package consists simply of a die-cut folder with a wrap-around window formed of 1½-mil polyvinyl chloride film. The film is pre-attached to the inside of the flat, center-scored card on standard window-carton machinery, secured by a specially formulated resin adhesive.

When a product is to be packaged, the stretchable film window is pre-formed in an aluminum mold by heat and vacuum. The product is laid flat in one of

the two pockets in the pre-formed film, with its base at the center fold line. The card is then mechanically folded over on the center score line to encase the object in the film pocket, after which the assembly is subsequently electronically heat sealed around the periphery of the doubled-over film. No additional adhesive is necessary.

The result is a package in which the bottle of Mira-Base appears to be suspended in air, since it is surrounded on all sides, including the base, by the transparent film. Due to the "memory" characteristics of the plastic introduced by pre-forming, the film, when activated by a bath of warm air, shrinks tightly around the bottle, presenting a neat, taut effect so that the film tends to disappear optically in favor of the bottled product. The retractable property, clarity, toughness and heat-sealing characteristics of the PVC film were the chief reasons for selecting this material for the new package.

The package may be hung on a pegboard display or will stand by itself, since the base of the bottle provides a base for the package—a feature that is not characteristic of skin or blister packs.

According to the developers of the new package form, savings up to 30% in cost in contrast to previous constructions are possible, depending on volume and the degree of mechanization employed.

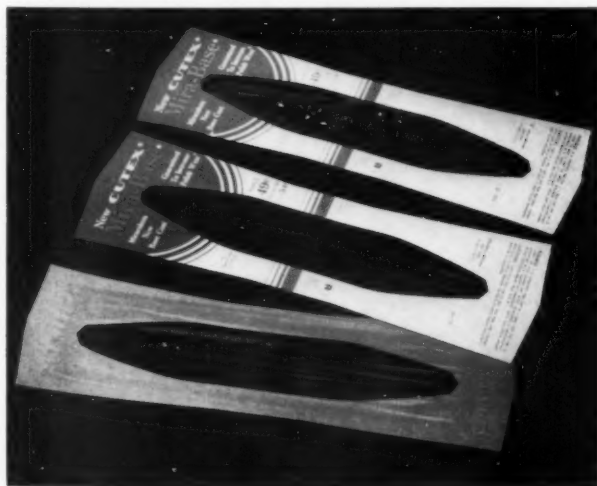
Reportedly, these savings may be achieved be-

cause of the thin-gauge film that can be used ($1\frac{1}{2}$ or $2\frac{1}{2}$ mils in comparison with $7\frac{1}{2}$ to 10 mils usually used for thermoformed blisters); elimination of thermoplastic or pressure-sensitive coatings on cards to attach blisters, and high-speed production of the windowed cards on standard window-making equipment in a carton-maker's plant. The development is also reported to be readily adaptable to automatic packaging that reduces overhead on volume runs. Machines with estimated speeds of 60 a minute for the complete operation are being built and still higher-speed machines are forecast. Handling is simplified in that the user buys the windowed cards completely prefabricated, thereby eliminating the separate purchase and handling of cards and blisters or film for skin packaging.

At present the pre-forming, loading and sealing of the Cutex package is being done on a custom basis by the developer of the new package. The new machines, however, will be available for use in the packager's own plant, doing the pre-forming, loading and electronic sealing [Continued on page 161]

SUPPLIES AND SERVICES: "Stretch-Pak" development by William B. Crane, Inc., 114 E. 32 St., New York 16, in conjunction with The Nevins Co., Clifton, N. J., and Downingtown Paper Box Co., Downingtown, Pa., using Goodyear Vitafilm D 80. Electronic sealers by New Jersey Electronic Co., Passaic, N.J.

Fabricated blanks consist of printed, die-cut, scored-across-the-center cards with $1\frac{1}{2}$ -mil polyvinyl chloride film window applied with adhesive in standard window-making equipment in carton-manufacturer's plant. Blank in rear shows film window partially pre-formed with pockets to receive item.



One of a series of cast-aluminum molds in machine, which are used both to pre-form film and to provide pocket for bottle. Card is then folded over and heat sealed. Whole operation is automatic on specially built, high-speed machine.



Two-compartment film pouch

Dual components of an epoxy resin repair compound—which must be kept rigorously separated until time of use—are now inexpensively packaged and dispensed in small quantities in a polyethylene pouch pack that is separated into two compartments by a specially curved cotter pin and washer. To prepare the resin—called Weld—for use, the cotter pin is removed, and the resin and an amine reactant are blended together by kneading the pouch.

The heat-sealed pouch, developed by Traffic Control, Inc., Lynn, Mass., is made of seamless 10-mil tubing, printed in red, white and black, and for display is mounted on a hang card with a latex adhesive. Front of the card shows examples of the compound in use; the reverse side gives preparation instructions. Entire cost is reported to be only 2¾ cents. The pouch, clamped and then filled from both ends, is coated at the bottom end with an epoxy to prevent transmission of the reactant. Filling accuracy within 1/100 cc. is reportedly obtained with a semi-automatic filler and jig. Polyethylene tubing by Bradley-Sun Div., American Can Co., Hillside, N.J. Cotter pins by Hindley Corp., Pawtucket, R.I.



DESIGN

Kit for kids integrates education and fun



Now in its seventh year of creating educational packaging, Bristol-Myers' Educational Service Dept. has developed a "fun-to-use" toothbrushing kit to impress children with the importance of brushing their teeth regularly. It is being distributed at a below-cost price through schools, dentists, hospitals, camps and civic groups. The kit consists of a folding carton—printed in red, white and blue—that contains a toothbrush and a tube of Ipana toothpaste. Designed to be used as a hang-up holder, the carton has two die-cut holes in its projecting rear panel for wall mounting. Die-cut sections in the carton top can be punched out to hold the brush and tube in upright position.

Included as part of the kit is a strip of stiff paper printed in black on white with a cartoon story that dramatizes a reason for good dental-health habits. For fun while they learn, the kids can "have their own TV show" by threading the strip through two punch-out slots on a television-screen-shaped area on the riser panel. Carton by Boxmakers, Inc., West Springfield, Mass. Educational cartoon strip by Sally Dickson Associates, 10 E. 49 St., New York.



Home on the range

Capitalizing on the documented appeal that Western movies and large, empty shipping containers hold for imaginative small fry, General Electric's Appliance & Television Receiver Div. is sending its line of electric ranges to market in sturdy corrugated units that can be converted quickly into playtime forts or trading posts. Each container is printed in an all-over design to resemble a frontier cabin, complete with animal pelts hanging up to dry, skulking redskins and cut-out doors and windows. After removing the range from a container, the top and bottom tray sections are joined to form a gabled roof for the play house. To prevent container damage during unpacking, the tray sections are secured to the container walls in the plant by steel strapping only. This assures that clean, no-tear opening will be achieved simply by breaking the steel bands.

Directions for assembling the house are printed on the front of each shipper. GE is offering a "Trading Post" container with its 40-in. range and a "Fort Custer" container with its 30-in. range. *Corrugated containers by Inland Container Corp., 700 W. Morris St., Indianapolis 6.*

HISTORIES

Two-stage redesign maintains brand identity

An effective way to educate consumers to accept a radical packaging change without losing any of the brand identity and good will of many years' standing is to do it by degrees. That's the philosophy of Corn Products Refining Co., Argo, Ill., which has just completed a two-stage label-and-bottle redesign for Linit liquid starch.

The first step, taken last spring, was a complete label redesign to introduce an improved product formula. A softly curved, flowing background design in yellow, blue and white was selected to suggest ease of use and to stand out in mass display, the company says. The Linit brand name was reduced slightly in size, but retained the same type style as before for carry-over identity.

This winter the company has completed its two-part redesign program by introducing the product in a new, more modern glass bottle. It is pinched at the waist so a woman can grip it easily, even with wet hands. The bottle's gracefully tapered shape also allows the label to face slightly upward, for easier reading on low shelves, the company points out. *Redesign by Harley Earl Associates, Warren, Mich.*



Pressure-sensitive tape

*From a
sandpaper technician
with real
stick-to-it-iveness
came a new kind
of adhesion that finds
in packaging today
a \$60-million market
for 240 varieties*

**GREAT
PACKAGING
DISCOVERIES - 3**



THIS MONTH'S COVER

In the depression days of 1930, when heat-sealing techniques for film were as unknown as space travel, few packaging innovations proved more useful than a strange new fastener called pressure-sensitive tape. It was made from clear cellophane and was coated on one side with an intriguing adhesive that remained permanently tacky and stuck tenaciously to any surface against which it was pressed, yet could be removed instantly and cleanly with one quick pull. Des-

tinued from the
start to fill an
important role in
packaging, this
unique fastener
was developed

primarily for the purpose of closing both bags and overwraps made from the recently introduced cellophane film.

Even the introduction of heat-sealable cellophane soon after in no way halted the success of this ubiquitous tape. For it has been constantly improved over the past 29 years by intense research that has developed many new backing materials and adhesive formulations with application to practically every type and shape of package. In less than three decades, production of pressure-sensitive tapes in hundreds of varieties has grown to a \$100,000,000-a-year business—a stature that unquestionably qualifies this material as one of the *Great Packaging Discoveries*. About 60% of this output—or 50,000,000 rolls in 240 varieties—is used for packaging purposes.

But the road to success was studded with problems. In fact, at the beginning, no one thought of cellophane as a tape material, nor even considered the packaging potential of pressure-sensitive tapes. The beginning was in 1925, when two-tone automobiles had become a sudden passion that generated a different kind of emotion among spray painters struggling to mask off car bodies and get a straight line between the colorful new lacquers.

A young waterproof-sandpaper technician for Minnesota Mining & Mfg. Co.—Richard G. Drew—watched as these car painters brewed homemade adhesives with which to apply newspaper and brown wrapping-paper sheets, or stuck the masking papers in place with medicine-cabinet adhesive tape. Their amateur efforts nearly always caused trouble. Many shop-formulated glues stuck so tightly that they stripped off fresh paint when the masking paper was removed. And the cloth-backed tape allowed solvents to seep through, adhering the tape firmly to the paint it was supposed to protect.

Drew—whose experience at this point added up to three semesters of college engineering—remarked profoundly that what the painters needed was a tape that would not set up and that would resist penetration by solvents. And he off-set sarcastic comment by rashly pledging to develop such a tape.

Using the facilities of the 3M laboratory, Drew started to learn something about the adhesive business and the difficulties of making his promised product. Many weary months were spent, patiently trying one combination of ingredients after another. Finally, he worked out a combination of cabinetmaker's glue and glycerine, applied to a strip of kraft paper, that looked as if it would do the trick. To prevent the paper from sticking to itself when rolled, a cheesecloth liner was necessary. And to cut down the cost, the company restricted the adhesive to only 1/4-in. strips at the edges of the 2-in. tape.

But the cheesecloth was troublesome to strip from the tape and the adhesive sometimes melted off when the car bodies were shoved into the curing ovens. Also, critical painters were particularly vocal about the "Scotch practice" of putting adhesive on only part of the tape. This objection was quickly met by

completing the coverage of the one side with glue, but the incident was not forgotten and is credited, by some, as the source of the company's famous trademark "Scotch" tape, which has become widely identified with pressure-sensitive tape everywhere.

However, 18 more months of research could not cure the other more serious faults and the company finally shelved the whole project and sent Drew back to selling sandpaper. Here, the whole idea might have died—except that Drew suddenly remembered a specially treated paper that had been used several years before in some experiments on sandpaper. Dusting off a roll, he made a quick test—and he and the company knew at once that they had licked the problem of rolling a pressure-sensitive paper tape without a liner. With renewed confidence, Drew pressed on and after several months of further research formulated his first rubber-based adhesive that would not cook away in the ovens. As a result of one man's persistent research, the first successful pressure-sensitive tape was on its way.

This accomplishment was as nothing, though, beside Drew's next and best known work—the development of transparent cellophane tape, which has influenced not only packaging, but practically every phase of both industry and home application.

By 1930 it had become evident that a transparent pressure-sensitive tape would be just the thing to seal bags and wraps made of cellophane. But everyone "knew," from the experience with masking tape, that if a glue would stick to one side of a cellophane strip, it would stick to the other side—making it impossible to wind the material in a roll.

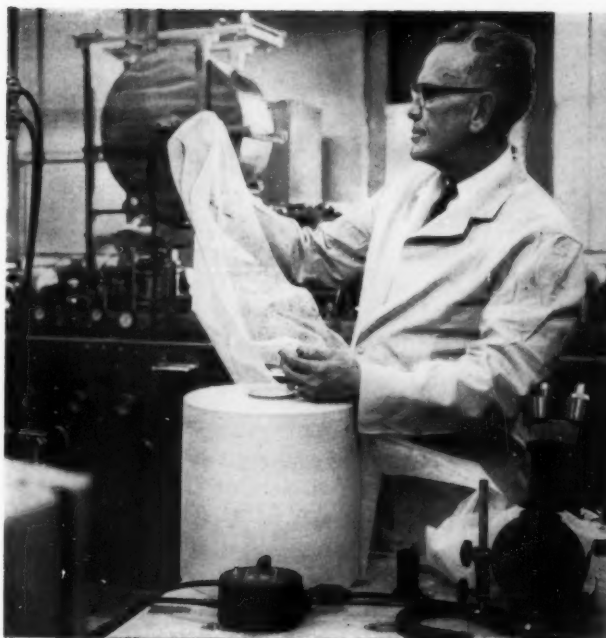
Drew agreed, but true to the spirit of research decided first to see for himself what would happen. He coated a strip of plain film with the adhesive used on the paper tape, then applied it to another piece of cellophane. When the coated strip was pulled away the adhesive stayed right where it belonged. In one stroke, Drew had proved that the insurmountable problem of adhesion did not even exist. The "why" behind this success was not discovered until later—that application of a resin-and-rubber adhesive in liquid form gives 100% coverage and thus, when dry, the adhesive cannot stick as completely to any other surface.

Since 1930 many other pressure-sensitive tapes have followed; today there are a total of 300 types. And though cellophane tape is still the most widely used in packaging, it has been joined by tapes with acetate, polyester and paper backings that can be clear, printed or colored.

Even a partial listing of applications shows how these tapes have penetrated every phase of packaging. They are used to close bags, bottles, cans and drums, to reinforce or close fibre and corrugated shippers, for bundling and securing set-up and folding boxes, to decorate and seal bright gift packages, and as tear strips on packages overwrapped in hard-to-open films such as polyethylene.

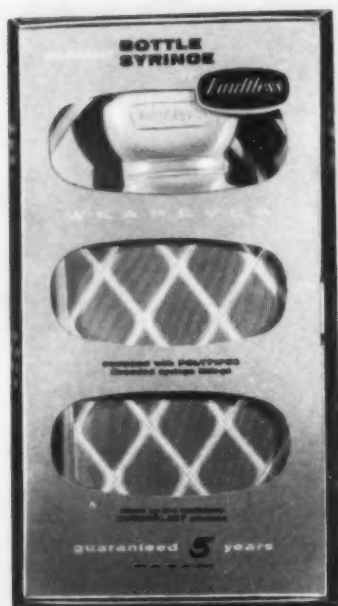
The basic patents ran out some years ago and 3M now has competition from 40 other manufacturers of pressure-sensitive tape. But the imagination and persistence of the young sandpaper technician has made "Scotch" tape one of the world's most famous trademarks.

Richard Drew is still active at 3M, where he is director of the Product Fabrication Laboratory—a group that performs applied research on new products. Never satisfied even with his latest products, he is hard at work on even better tapes, made from newer plastic films, synthetic fibres and non-woven fabrics.



Richard G. Drew, the inventor of pressure-sensitive tape, is shown here at work in his laboratory.

**TOP
PRICE**



**MIDDLE
PRICE**



**LOW
PRICE**



ORIENTED FO

The subtleties of design required to keep up with the exacting demands of today's display-oriented, self-service drug stores is pointed up by a packaging program just completed by Faultless Rubber Co., Ashland, Ohio.

What Faultless is doing should probably be done by any number of firms whose packaging has fallen behind the rapid changes taking place in drug-store merchandising.

Faultless makes hot-water bottles, fountain syringes and other rubber sundries. Company management came to the conclusion some time ago that if it was to maintain a leading sales position, a radical departure from the uninspired type of package heretofore associated with such products was needed.

Something more effective in the way of design

Three price lines are quickly distinguished by design strategy. Largest size, bright blue and black box with three oval windows identifies the highest-price line; slightly smaller charcoal and light blue, or charcoal and pink box with two oval windows, the medium-priced line; smallest light green box with one oval window, the least expensive. Oval windows, covered with tough polyester film, complement oval shape of new Faultless trademark. The trapezoidal-shaped folding boxes add visual appeal and emphasize selling copy on their slanted sides. New one-piece box construction with lock tab permits easy opening and secure reclosing.

ED FOR DISPLAY

*Stepped-up design and color treatment of a line of rubber sundries
provide a lesson for those
whose packaging has not kept pace with drug-store merchandising trends*

appeal was required to induce retailers to give better display to these items. More pleasingly feminine colors could be used to distinguish various price lines. A strong trademark and family design were essential to create a brand image in the mind of the consumer. And package copy demanded harder sell in the absence of clerk service.

After a year's study, a complete new line of packages has been created, incorporating features that are well worth noting.

One of the most obvious changes is the new trapezoidal shape of the folding boxes, selected to add visual appeal, to increase sell-copy space on the sides of the packages and to make for easier handling. The new one-piece construction with lock tab that permits easy opening and reclosing completely eliminates lost and mixed-up covers. Beveled sides are easier to handle when the packages are shelf stacked and provide angled display of messages printed on the sides.

A new trademark symbol—a long oval enclosing the words "Faultless, Craftsmen in Rubber"—identifies all packages and is aimed for quick association with the same symbol when used in advertising and promotion. Oval-shaped, die-cut windows, providing product visibility, continue a subtle association with the oval-shaped trademark; three oval windows distinguishing the highest-priced product in the largest-sized box; two oval windows in slightly smaller-sized boxes, covering the medium-priced lines, and one oval window in the smallest-sized boxes for the lowest-priced items. Thus the clerk or cashier has a

quick visual check on the approximate price level of the product.

All the windows are covered with heavy-gauge polyester film that gives maximum clarity, yet resists breakage.

Further distinction between the various price lines is provided by femininely pleasing decorator colors for the packages: bright blue and black for the highest-priced line (a color combination selected by women in consumer tests for having the highest connotation of quality); light blue and charcoal, or charcoal and pink for the medium-priced line, and light green for the least expensive.

The company's trade name—"Wearever"—has been retained on the new packages because of its acceptance in the trade, but has been subordinated to the "Faultless" brand name. The lower part of the front panel of each package emphasizes the company's guarantees, ranging from five years to one depending on quality and price. Back panels explain how to use the products, list the accessories included and suggest related items. Packages for Faultless nursery items and ice caps have also been redesigned as part of the new family.

With this colorful array of new packaging, Faultless believes it has a merchandising tool to win store display positions that will be reflected in increased sales of the company's products.

SUPPLIES AND SERVICES: Design by Ken White Associates, Westwood, N. J. Folding boxes by A. L. Garber Printing Co., Ashland, O., using Du Pont's "Mylar" polyester film.



Amber-green bottles, end product of
E. & J. Gallo Winery's \$6,000,000 investment in its own glass-making plant at Modesto, Calif. Called Flavor-Guard, the glass is made from a company-developed formula for protection of wine flavor from light rays.

Wine maker

Every day in the week, a half-million bottles pour out of a new \$6,000,000 West Coast glass plant so unlike any other bottle-making facility in the world that its impact on the packaging field will be felt for a long time. The significance of this 13-acre plant at Modesto, Calif., lies in these facts:

1. It is owned and operated by and for Gallo, whose wines outsell all others in the United States. The Gallo Glass Co. does not sell to other companies any of the bottles it produces; its entire output goes to the E. & J. Gallo Winery.

2. No other winery in the world is known to own its own glass plant. Captive can factories are operated by some big canners, many American whiskey distillers manufacture their own charred-oak casks for aging their product and large produce-marketing cooperatives have turned out their own wooden boxes. But until now the growing glass hunger of the wine industry has always been satisfied by independent glass suppliers.

3. The new Gallo Glass Co., created by the family that owns the winery, created in turn a distinctive amber-green glass, Flavor-Guard, so named because it is designed to provide protection against flavor-stealing light rays. The glass formula is, in fact, so special that no outside glass company was, according to Gallo, prepared to supply it in the volume required and this was a major reason for building the captive plant. All 32 Gallo wines are bottled in the new glass.

4. The six-line plant and its adjacent six-acre, two-million-case warehouse will, when coupled by conveyors with the winery's bottling lines (now about a quarter-mile distant), make Gallo the first completely integrated raw-materials-to-packaged-product plant in its industry and perhaps a pace setter for many other packagers.

For itself, Gallo sees several advantages in operating its own 200-employee glass plant. Such a captive operation, located at the site where packages are used, can offer an assured source of supply and substantial freight savings, the company believes. Since profits can be kept smaller or non-existent when a firm sells to itself, the cost of the finished package may be lower—though this may vary in a competitive economy.

In debating their decision, however, Gallo executives weighed telling arguments against setting up a captive container plant. These include the heavy initial investment, the danger of dependence on one source of supply and the fact that prices may drop

turns bottle maker

*Does a captive operation pay? Gallo will find the answer
in the 500,000-bottle-a-day pushbutton plant
that now feeds special amber-green glass direct to its packaging lines*

so that containers can be bought outside for less.

But Gallo also considered three additional factors in favor of the move. Its winery uses so much glass that its own requirements would keep a big glass plant going. Adoption of Flavor-Guard glass would mean paying an additional premium to any outside producer that could produce it, but in a Gallo-owned plant, running only a single color, no significant extra "color cost" would apply. And the company had long been paying such a premium for even conventional clear flint glass bottles because all Gallo containers have a distinctive private-mold shape.

For many years American winegrowers used, for their numerous table and dessert wine types, the

variously shaped bottles that originated long ago in the main wine regions of Europe where the types originated centuries ago. But as their reborn industry attained maturity during the second decade following Repeal, American wineries found that European bottle shapes meant nothing to the average consumer in this country. So they began redesigning their bottles, ordering them in distinctive private-mold shapes engineered for maximum strength, minimum weight, automatic filling and shelf appeal. They also began evolving new types of wines more appealing to modern American tastes.

Because popular American wines are competitive in price, varying no more than pennies from

Six tests are applied to bottles emerging from annealing lehrs. This visual inspection and five automation or instrument checks are performed on every Gallo container. In rear are furnace holding 400-ton lake of molten glass and bottle-making lines.



each other, there has been considerable jockeying for economic advantage by their makers. Without compromising product quality, these companies strive for swifter bottling lines, transportation savings and other economies to boost sales and profits.

One major Gallo competitor, conscious of the heavy cost of transporting its bottled product to the populous Eastern markets, launched a huge tanker that carries 2½ million gallons of wine in bulk to the East where it is delivered to regional wholesalers and wineries for bottling and sale.

This sort of solution did not appeal to Gallo,

60-valve filler gives Gallo half again as much bottling capacity as equipment it replaces. This first installation at a winery is of a type which has been long used by bottlers of other beverages.



PHOTO CROWN CORK & SEAL

which has long made a sales point of the fact that its wines are bottled at the winery where they are made. And with the new Flavor-Guard glass developed by company researchers, Gallo executives believed it would be difficult enough to obtain such glass from one factory, let alone matching it in the East to supply a new and costly plant there. So Gallo built its captive glass plant and coupled it with what is said to be the country's largest wine warehouse. Big enough to accommodate five football fields under its roof, the new warehouse cost another million dollars. It stores both newly made bottles and Gallo wines awaiting shipment.

Modern, automatic factory

The furnace of the glass plant contains a 400-ton lake of molten glass, maintained at a 2,750 deg. temperature. This furnace, operating around the clock and said to be the largest in any bottle plant west of Mississippi, spews out 220 tons of liquid

glass daily to six bottle-forming and annealing lines.

This output is fed in turn on a daily diet of 235 tons of glass-making materials. These include silica sand from Calaveras County, Calif., soda ash from the Green River country of Wyoming, limestone from the Mother Lode region of California and other ingredients from as far away as Mexico and Chile. Seven days' supply of these materials is constantly maintained in the batch-plant towers of the bottle factory. From these towers materials are metered out by pushbutton controls, dropping onto sealed underground conveyors which in turn serve automatic elevators that feed the inferno inside the giant brick-walled furnace.

Gallo claims this plant is the most automatic, most modern glass plant in the world. It has a complete mold shop, a water-softening plant, vital stand-by fuel and power plants for the great furnace and its own offices.

Since there's no economical way to cool off 400 tons of molten glass for a weekend holiday, Gallo's bottle factory is designed to operate 24 hrs. a day, seven days a week, throughout the year. From the furnace, the fiery liquid glass runs to the six bottle-forming units; conveyors carry the formed bottles into long annealing ovens. As the ranks of amber-green bottles leave each annealing oven, they are diverted by a conveyor to pass single file by a girl worker for visual inspection.

Quality control

Six tests and inspections are performed on every bottle made, five of them by automation or by instruments. Further, samples from each run of bottles are tested by technicians in the Gallo laboratory. Here the glass is gauged with a spectrophotometer to check its ability to filter out particular light wave lengths. The glass also is checked for quality, strength and uniform density.

The aim of all this is to maintain the competitive advantage Gallo feels it has attained with its new Flavor-Guard glass. According to the company, the development of this distinctive amber-green glass followed extensive research by Gallo into photochemical reactions—the changes certain light rays cause in the taste of such natural products as wine.

During these studies the company laboratories tested the light-transmission properties of many different kinds of glass, including types never before used for the manufacture of containers. The result is a smokier, darker green than usually found in green glass bottles.

Company tests showed that Flavor-Guard bottles effectively screened out, to a significant degree, light wave lengths in the ultra-violet, violet, blue and green bands. This provided protection for wine not



'Bottled at the winery,' long a sales point stressed by Gallo, is accomplished on these parallel lines, now about a mile away from the glass plant. Gallo plans to integrate plant and winery to complete its bottle-making project.

given by the conventional clear flint glass they and most other vintners were then using. Flavor-Guard also did a better job of screening than conventional green bottles used by some European wineries, according to Gallo.

The company's switch from flint bottles to amber green was intended to deliver to consumers wines with an original, delicate cellar taste protected from flavor-stealing light rays. However, before announcing the change, Gallo wanted proof that this difference was noticeable to consumers. Test runs of Gallo wines in bottles made of the new glass were placed without fanfare or explanatory advertising in certain selected stores. Previous sales records of these stores were carefully checked.

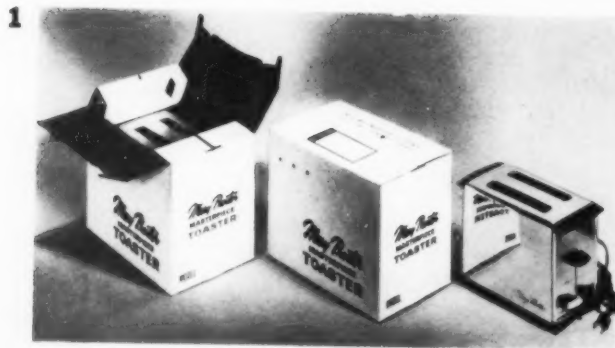
Consumers who showed preference for the new amber-green bottles are reported to have credited the wines' "better taste."

That was enough for Gallo. The company went ahead with its plans to erect its own glass plant and warehouse and also planned the widespread advertising campaign now under way to persuade consumers that Flavor-Guard bottles are better.

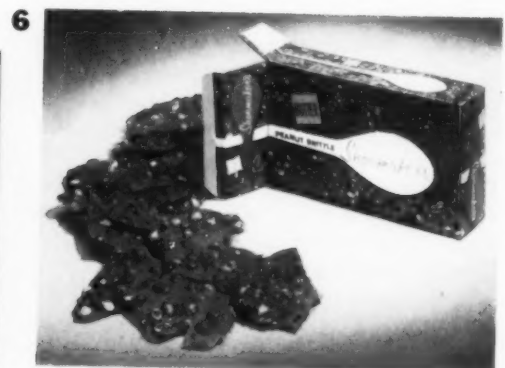
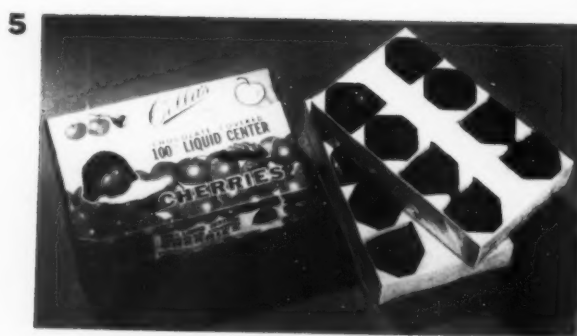
SUPPLIES AND SERVICES: Glass-making equipment by Hartford-Empire Div., Emhart Mfg. Co., Hartford, Conn. Filler by Crown Cork & Seal Co., Inc., 9300 Ashton Rd., Philadelphia 36. Labels by Stecher-Traung Lithograph Corp., Rochester 7, N.Y., and Security Lithograph Co., 200 Broadway, San Francisco 11. Closures by Aluminum Co. of America, Pittsburgh 19.



Largest wine warehouse in the U. S. is this six-acre, two-million-case storage area adjacent to Gallo's new glass plant. Both newly made bottles and the bottled wines awaiting shipment are stored here.



PACKAGING PAGEANT



- 1 This one-piece, white corrugated container, printed in red and gold, is designed to reflect the high styling of Proctor Electric Co.'s new Mary Proctor Master-piece Toaster. Slotted top and bottom flaps that fold in support the toaster at all four corners, "floating" it away from the container. Creped wadding beneath the closed top protects product from friction. Container's printed address label simplifies gift mailing. Container, Container Corp. of America, Chicago.
- 2 Flower-petal decorations molded in the shoulder and the heel of these new glass jars used by Preserves, Inc., add distinction and appeal to Acme Stores' private-label jellies and preserves. The paper label's lacy border complements the jar's delicate petal decoration. Jar, Owens-Illinois Glass Co., Toledo. "Twist-off" cap, White Cap Co., Chicago.
- 3 A new inert polyethylene-extruded coating applied to the inside of Old World Baking Co.'s cartons for Pecan Fudge Brownies was selected to provide moisture and grease protection, and to enable packaging the brownies hot, right out of the oven. This packaging reportedly delivers a fresher, more flavorful product that won't stick to the carton or stain through. The white, smooth outer surface gives realism to the colorful, appetite-appeal pictorial. "Hi-Fi Polyglaze" carton, Marathon, a Div. of American Can Co., Menasha, Wis.
- 4 Initial introduction of Cott beverages in a large 10-oz. size has been made in the Boston area by Cott Bottling Co., Inc. The king-sized stippled bottles, in clear and emerald-green glass, carry the distinctive



10



Cott applied-color label. Contents are identified on lithographed metal closures. Bottles, Anchor Hocking Glass Corp., Lancaster, Ohio.

- 5 For chain-store and supermarket merchandising, The Bianchi Co. packages its Cella liquid-center chocolate covered cherries in compartmented paper-board twin trays, individually wrapped in transparent cellophane. The complete package is then over-wrapped in six-color rotogravure-printed cellophane featuring luscious red cherries. Price patch in upper right corner is in the form of a red-bordered white cherry. Wrap, Milprint, Inc., Milwaukee, Wis.
- 6 Four-color lithography on this cellophane overwrap for Shoemaker's Peanut Brittle is almost as realistic as the product the package contains. Simplicity of the design and faithful reproduction are calculated to give an impression of the product having been made in one's own kitchen. Wrap, H. S. Crocker Co., Inc., San Bruno, Calif.
- 7 Both front and back panels of California Packing Corp.'s new wrap for Del Monte seeded muscat raisins now carry full-color illustrations—a rich array of raisins on one panel and a luscious-looking recipe that can be made with the product on the reverse panel. Family resemblance is maintained through use of the basic design and colors on other Del Monte products. Wrap, Western-Waxide Div., Crown Zellerbach Corp., San Leandro, Calif.
- 8 Full-color illustrations give impulse-purchase appeal to Mirro Aluminum Co.'s Mirro Foil Wrap packages. Pictorials suggest uses of foil for roasted fowl, charcoal-broiled hamburgers, corn on the cob, molded salad. Three sizes are offered: 12-in. widths in 25- and 75-ft. lengths and 18-in. width in 60-ft. length. A protective varnish coat adds sparkle to the illustrations and prevents soiling. Cartons, Container Corp. of America, Chicago.
- 9 A transparent acetate thermoform snapped over the top of a lithographed metal can suggests a new idea for the combination package or for attaching a deal offer. Jacee Chemical Co., Inc., adopted the idea for merchandising Jet-Action Bondo—a plastic filler—sold with a tube of Bondo Liquid Hardener. Cans, Continental Can Co., New York, and Fein's Tin Can Co., Inc., Brooklyn.

- 10 Metered-spray aerosol dispensers for perfume and cologne are being offered in boxed sets by Mary Chess Cosmetics. The perfume containers hold approximately 250 spray applications; the cologne dispenser, about 600. The Schiaparelli fragrance comes in a black box with pink interior; the Mary Chess box has a gold-colored cover. Cologne containers, Flaconette, New York, with metered valves by Valve Corp. of America, Inc., Bridgeport, Conn. Perfume containers and metered valves, Risdon Mfg. Co., Naugatuck, Conn. Contract filling, Aero-Chem Lab-

oratories, Inc., Bridgeport, Conn. Boxes, Wallace Paper Box Co., Maspeth, N. Y.

- 11** Dinsmore Instrument Co.'s display package for its Travelite auto compass dramatizes the product in a contoured, deep-drawn acetate butyrate dome, friction fitted to an extension-edge set-up box base that holds all product accessories and also serves as an attractive platform. Box, made to exact tolerances, assures secure fit of dome. Dome, Crystal Preforming & Packaging Corp., Warsaw, Ind. Acetate butyrate sheet, Flex-O-Glass, Inc., Chicago. Box, Barger Box & Printing Corp., Elkhart, Ind.

- 12** The Kroger Co.'s frozen foods appear in new family-designed packages aimed at creating a strong brand image for the chain's private-label line. Note the minimum of wording on the face of the package—trade name in a blue panel and product name in red. Wraps, Pollock Paper Corp., Dallas.

- 13** The convenience of a slide-out tray is offered by the construction of new cartons for Alcon Laboratories, Inc.'s Steri-Unit—ophthalmic medications in pre-sterilized single-dose units. Vials fit into die-cut openings in tray, which has a die-cut pull-out tab. Carton, Continental Can Co., Boxboard & Folding Carton Div., New York.

- 14** A polyethylene rack bag that eliminates such extras as grommet, header, staples or paperboard insert is the new package for kitchen cloths by Morgan-Jones, Inc. A two-award winner at the recent National Flexible Packaging Assn. competition, the bag has a reinforcing heat seal at the top to add stiffness and rigidity for hang-up. Bag, Bemis Bro. Bag Co., St. Louis, Mo.

- 15** A revival of design elegance for quality cosmetics is indicated by the packaging for "Collezione Luminosa," a new line created in Italy and distributed in the U. S. by Princess Marcella Borghese, Inc. The filigree-ornament motif is printed and embossed on gold-colored foil, along with a miniature polychrome crest of the Borghese family. Design, Luba Tavor, New York. Set-up boxes, F. N. Burt Co., Inc., Buffalo, N. Y. Printing and embossing, Donrico, Inc., New York. Compact case, Plume & Atwood Mfg. Co., Waterbury, Conn.

- 16** Flour in cellophane bags is being marketed in Ireland by W. P. & R. Odlum, Ltd., which reports a notable increase in sales since introduction of the new packages. Odlum's Fairy Self-Raising Flour is in a reverse-printed, double-wall gusseted bag. The single-wall bag for Cream Flour has a scale calibrated in inches printed along the gussets, 1 in. representing about $\frac{1}{2}$ lb. of flour—a measuring aid. Bags, Colodense, Ltd., Bristol, England, using cellophane by British Cellophane, Ltd., London.

- 17** New foil-laminated ice-cream cartons reportedly have resulted in a sharp increase in sales, better product protection and greater eye appeal for Knerr Dairy products. Carton is made of foil, wax laminated to 22-pt. fibreboard with paraffined interior. Cartons, Sutherland Paper Co., Kalamazoo, Mich., using Aluminum Co. of America foil.

- 18** Polymer-coated cellophane packages reportedly are increasing sales for Crowe Nut & Baking Co. snack foods by opening up new supermarket distribution outlets. They are reported to provide longer shelf life and neater appearance. Package, Color Wrap, Inc., Denver, using Olin's OX-511 cellophane.

- 19** Peacock's Steak Baste, a new W. G. Peacock Co. product that is brushed on broiled foods, comes in a carton with a basting brush taped to one side. Garlic and onion juice cartons have illustrations running around three panels and when three cartons are set up properly, side by side, they present an appetizing picture. Cartons, Continental Can Co., Boxboard & Folding Carton Div., New York.

- 20** Nanard Products' Chemwipe kit merchandises five different special-purpose cleaning cloths at once in a space-saving, home-storage package. Each cloth is in its individual polyethylene pocket and the kit can be mounted by its header piece on a door or broom-closet wall. Container, Wrapture, Inc., Flushing, N. Y. "Visqueen" polyethylene, Visking Co., Div. of Union Carbide Corp., Terre Haute, Ind.



13



15



14



16



PACKAGING PAGEANT

17



18



19



20



OWENS-ILLINOIS ASSURES YOU A COMPLETE PACKAGING APPROACH



Continuing Research

Pure research into fabrication of glass, packaging research into processing and handling methods in customer plants, market research into consumer attitudes. All add up to finer packaging.



Engineering Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.



The Right Container

There's an O-I container to meet your special needs: Duraglas containers; Libbey Safedge packing tumblers or premiums; Kimble Ampuls and Vials; and a variety of plastic containers.



The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.



Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons developed to serve you efficiently in the retail store and warehouse . . . as well as on your own filling line and in transit. This is the new openized carton with easy-open flaps.



Featured above are quart Decanter No. C-4481 and 5 oz. sauce bottle E-2305.



Tomato juice cocktail "showcased" in gleaming Duraglas Containers, builds high-impulse sales and appetite appeal at home. Duraglas Containers with plastic pour-out fittings assure most convenient dispensing for Worcestershire Sauce.

Your product's natural COLOR is your best salesman . . .

In many homes, tomato juice cocktail is becoming the #1 favorite appetite "waker-upper." And the brands that are setting the high-impulse sales pace are packed in glistening Duraglas salespackages.

Duraglas Containers combine the benefits of an attractive package plus complete product visibility . . . never add an unpleasant taste to the full-bodied zestful flavor of their contents . . . have an easy-

to-reseal closure for safe storage, handy re-use.

You can profit from the economy and high sales-appeal of Duraglas Containers. Call the nearest Owens-Illinois office today for details on the complete Owens-Illinois packaging service—the *right* Duraglas Container, fitment and closure . . . attractive label designs . . . and sturdy cartons imprinted with your sales message.

DURAGLAS CONTAINERS
AN **Ⓢ** PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO



Rapid rotation of plastic casings switches the operation of this new filler to accommodate either one-third pints, half pints, full pints or quart containers of milk and other liquid dairy products. This adjustment eliminates the need for conventional interchange of parts for container-size change-over. Accordion-pleated silicone-rubber connectors (center) cushion the filling action between the filler bowl and the filler funnel.

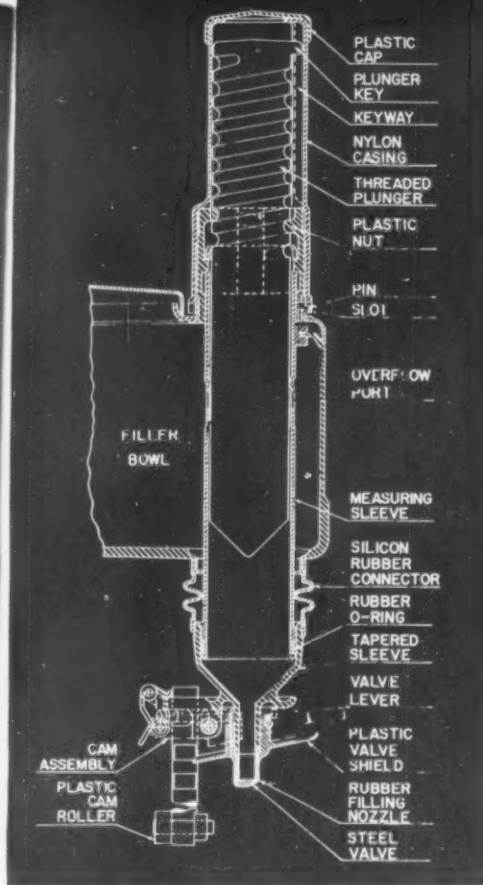
QUICK-CHANGE LIQUID FILLER

*Designed for paper milk containers,
new machine in use at Tuscan Dairy
cuts down-time 65%
with twist-set valves
that precisely change fill volume
without change of parts*

Flexibility and increased operating speed—desirable but frequently opposed goals in the design of packaging machinery—have been happily harmonized in a new intermediate-speed rotary filler for milk cartons that employs an entirely new idea in valve design to increase output 100% and cut the time required for changing over for different container sizes by 65%.

Two machines, including the prototype, have been installed at Tuscan Dairy Farms in Union, N. J., to facilitate packaging of regular and homogenized milk, light and heavy cream, half-and-half and chocolate drink, all of which are sold in half-pint, pint and quart containers.

Built to accommodate the flat-top type of carton, the 15-valve units fill fractional sizes at speeds up to 120 cartons per minute and quarts at 90 per minute (compared with former speeds of 60 and 40, respectively). Yet so accurate is the mechanism that filling tolerances are reported by the company to be held within only two grams.



Telescoping design of filling assembly is detailed in this cross-section drawing. As bullet-shaped plunger is rotated by turning upper casing, it moves up or down to change internal volume of filling chamber. Bottom funnel—shown in closed position—drops to allow in-flow of milk from filler bowl and is sealed by the rubber bellows.

The unusual design of the filling mechanism may generate worthwhile ideas for packagers of other liquid products that require extremely accurate volumetric fills and minimum change-over time for an assortment of containers.

On previous machines used by Tuscan, eight valve assemblies had to be taken out and replaced to change container size—an operation that took at least 20 minutes. Furthermore, such a switch required utmost care in sanitation to avoid contamination of the milk.

The new 15-valve filler is changed over by rotating the top of each valve from the outside without removing a single part—and consequently with no contamination—in only 5 to 8 minutes. Tuscan averages four changes per day and the total time saving is about 54 minutes—equivalent in production time to almost 5,000 qts. per day.

When this gain is added to the basic 100% increase in line speed, there is a bonus in output per manhour, despite the fact that two operators are

needed on each new machine instead of a single man on each old unit.

In basic design, great care has been taken to eliminate dead pockets in the measuring chamber and to provide constant recirculation of milk back to the filler bowl, even when no cartons are entering the machine. To streamline the unit, outside cam rods have been eliminated. And ingenious use has been made of nylon and silicone rubber, as well as conventional stainless steel, to simplify mechanical action, eliminate metal-to-metal friction at vital points of wear and, reportedly, keep down the maintenance cost of the machine.

Key to the accurate and speedy operation of this unit is the unique construction of the filling assembly. Each measuring chamber consists of a stainless-steel sleeve containing a partially threaded and adjustable stainless-steel plunger. At the top, the plunger is enclosed by a nylon casing that is slotted around its base and contains an internal keyway that engages a key on the plunger.

Between this rotating plastic cylinder and the plunger is a fixed "nut," also made of nylon, with an inside lug that engages the rolled-in threads on the hollow steel plunger. In operation, the plastic casing is held in position by a pin which fits into one of the slots around the base. When the casing is lifted, however, it can be turned. This raises or lowers the plunger in the measuring cylinder, changing its internal volume and quickly varying the fill without anyone touching or changing any of the inner parts that are in contact with the product.

Since the plastic casing is translucent, the top of the plunger inside is visible. It is aligned with marks molded into the casing to show approximate container fills. Very fine adjustments can be made on each filling head by turning individual casings a single notch at a time and thus varying internal volumes an infinitesimal amount. Casings are locked in place by pushing them down on their pins. Lugs between the casings and inside nuts engage to prevent shifting during operation.

Sliding up and down over the bottom of the measuring sleeve, which protrudes from the bottom of the filler bowl at each filling station, is another tapered sleeve that is attached to the filler bowl by an accordion-pleated, silicone-rubber connector. This funnel ends in a rubber and plastic filling nozzle that is closed by a stainless-steel valve made in a complex, semi-cylindrical shape. When open, this valve causes the milk to discharge in an umbrella pattern to eliminate foaming. An interruption at the rear of this pattern allows [Continued on page 174]

SUPPLIES AND SERVICES: Model 300-15A rotary milk filler, cartons by American Can Co., New York 17.

Oil stays where it belongs—on the product, off the package—with International Harvester's new fluorochemically treated wrapper (right) for agricultural twines containing preservative mineral oil. Old wrapper (left) became oil soaked and almost illegible only days after packaging.



INVISIBLE BARRIER



Package performance in the field is reportedly excellent, even under a broiling sun. Both individual bail wrappers and the corrugated carton, which is internally coated with unique fluorochemical sizing, remain free of oil.

The oil-repellent effect of a new fluorochemical treatment for paper* is solving a problem that has plagued the International Harvester Co. for all of the 70-odd years that it has manufactured binder twine. It dramatically suggests the solution of many other packaging problems—wherever strike-through from oily contents is spoiling package appearance.

Who—other than a harvest hand or an agricultural-twine manufacturer—would suspect that such twine poses an oil problem? And who, outside the industry, would realize that this homely product represents an enormous market—amounting to 300 million pounds and \$50 million last year for both binder and baler twine?

*See "A New Repellent Sizing," MODERN PACKAGING, Aug., 1957, p. 137.

The fact is that both products, made of vegetable fibre, contain a liberal amount of special mineral oil which is added during manufacture for preservative purposes and to make the twines soft, pliable and strong. Dried-out twine breaks easily. Hence, when a package of agricultural twine stands on the shelf between one year's harvest and the next, not only does an ordinary paper package become a sad sight, but the permeation of oil through the paper causes the product to lose its effectiveness. And this is a low-margin, highly competitive product that probably couldn't stand the cost of any container more expensive than paper.

International Harvester's interesting solution is to wrap each huge ball of binder or baler twine in chip-grade paper and, in the case of baler twine, to ship two such 20-lb. balls in a printed, corrugated container. Binder twine, half the caliber of the other, is packed six 8-lb. balls to the package.

Both the wrap and the box have been treated with the unique fluorochemical sizing which provides an invisible armor against penetration by either oil or water. Result: Harvester's twine now reaches its users in clean, bright packages which promote the

International Harvester finds

a dramatic solution to

a 70-year old problem by

adopting fluorochemical sizing that

stops permeation of paper packaging

by vital oil in binder twine

ER TO OIL

"IH" brand identity and the twine can stand indefinitely in these packages without wicking its protective oil into the paper.

Interestingly enough, the IH packages demonstrate two means of applying the fluorochemical repellent to paper. In the case of the inner wrap, the colorless chemical is added, as a true size, during the paper-making process. In the case of the corrugated box, only the inner liner paper is treated and this can be done at the corrugated plant by squeezing the size into the sheet with a roller coater under pressure. Of course, the chemical does not stand on the surface like a conventional coating, but penetrates and coats the fibres throughout, so that its effect is that of a sizing.

The protective treatment adds approximately 20% to the cost of the inner wrap and 13% to the cost of the corrugated container. Harvester officials believe it will more than pay for itself in increased sales to satisfied customers.

Previously, it has been IH as well as industry-wide practice to ship the balls of oily twine in large multiwall kraft bags. No inexpensive means of stopping oil penetration of the bags had been found and most packagers had concluded that this was a problem that just had to be lived with. Harvester has tested the repellent application to bags and believes it would be effective here as well, but it believes the cartons—an innovation in the industry—will handle and stack better and make a favorable impression.

Twine isn't a big-profit item in itself. But it's a significant traffic producer for farm-supply dealers and for such a company that makes hundreds of other farm-equipment products.

About three years ago Harvester's fibre and twine

division launched a concerted drive to develop an oilproof package. Executives scoured the country for ideas—then discovered that their own West Pullman (Ill.) Works, only a few miles from their Chicago headquarters, had an oil-resistant method for packaging metal parts which might work equally well for twine. At the same time a major supplier introduced Harvester to a fluorochemical treatment boasting marked oil repellency.

With the aid of experimental work by a Michigan board mill, Harvester's research department worked out a combination of these treatment methods which, when applied to the inside of a package and to the chip-grade paper in which each ball of twine is wrapped, keeps oil in the twine and off the package exterior for a minimum of seven months. Since twine is sold only during the five-month growing season, but produced year-round, the new package plus careful first-in, first-out stock control is expected to end the problem of oily packages and oil-less twine.

The repellent chemical is apparently non-toxic. Cows are notorious for eating anything in sight and are especially partial [Continued on page 172]

SUPPLIES AND SERVICES: "Scotchgard" fluorochemical repellent by Minnesota Mining & Mfg. Co., St. Paul 6, Minn. Corrugated cartons by Continental Can Co., 530 Fifth Ave., New York 36; Container Corp. of America, 38 S. Dearborn St., Chicago 3, and Union Bag-Camp Paper Corp., 233 Broadway, New York 7. Experimental work on cartons by American Box Board Co., Grand Rapids 2, Mich.

New package design is enhanced by lack of oil strike-through on these treated corrugated cartons that replace traditional kraft bags. These similar shippers for Harvester's twin brands vary only in color. Note reverse copy on top of each carton calling attention to oil-resistance feature.



How do you get your best packaging ideas?



Erwin Benkoe
Vice President
Toy Research Institute, Inc.

In an effort to develop better packages, we find that it is not usually the case that one individual comes up with a bright idea. Rather it is a combined effort.

The starting point is usually a meeting between the art director, the design director and the sales manager to evaluate the problem. Then several samples are made, with different executions, and tests are made both on ultimate consumers as to their reaction and on the sales personnel who have to sell the product. We feel that in order for a product to sell successfully, the sales personnel must be enthusiastic about it and this is best served by enabling them to "be in" on the packaging.

In the final analysis, it is all up to the design director to evaluate the results of tests and criticism, to blend and compromise with the various factors entering the picture, the last of which, but by no means the least, being the cost of the package itself.

We have found no short cut that would lead to the best packaging idea, only hard work and an open mind, which pays off in the end. At least for us it did, as we have won two silver packaging awards in the Variety Chain Store Competition for two years in succession.

Helmuth Hundertmark, *Assistant, Machinery Research & Development, Bristol-Myers Products Div.*: Obtaining good packaging ideas is most often accomplished by drawing upon and sifting through the experiences of the personnel of one's organization. These ideas are obtained from past exposures to similar situations, ideas gained from studying packaged items, packaging publications and attending packaging shows.

Another excellent source of ideas is the discussion of packaging problems with the personnel of manufacturers of packaging equipment and material. It is a good company policy to have an open door for salesmen and representatives. Their visits often lead to new ideas about various problems discussed.

Also, an exchange of visits with other companies to view various packaging operations will often result in new ideas for packaging problems.

Additional information on packaging can be gained

by joining and participating in the activities of the various trade organizations. Here one meets with similar interests and the discussions that take place very often bring forth new ideas.

Ideas may also be obtained for a fee from the various consulting firms who will study your problems and submit recommendations for their solution.

R. W. Bonnet, *Packaging Engineer, Duncan Electric Co., Inc.*: Our best ideas originate from customers' complaints. These complaints are something specific that must be corrected. Our best ideas are initiated by our efforts to meet the situation causing the customers' complaints. In other words, we need some sort of stimulant to get the ideas started.



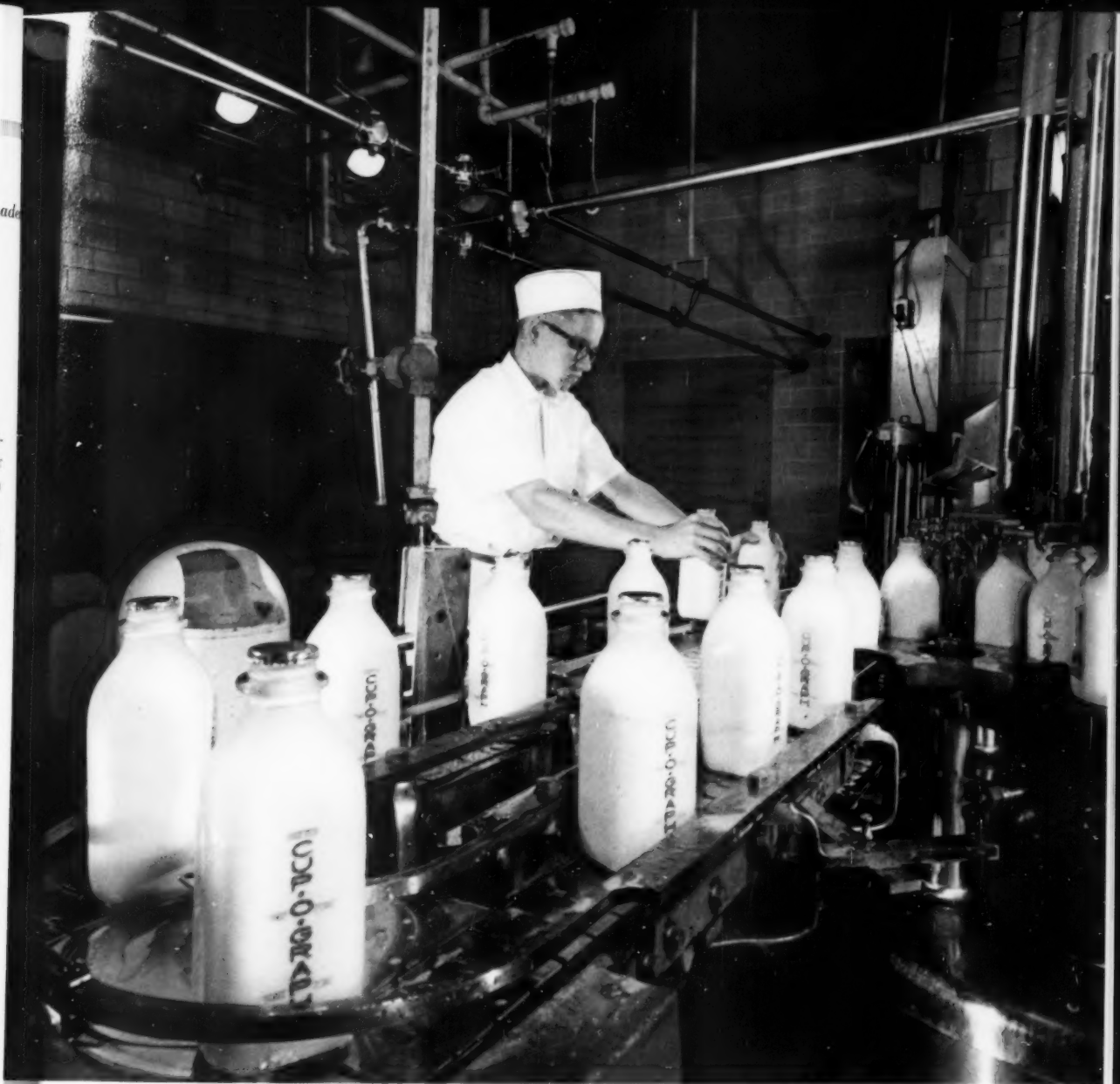
Donald C. Otstot
Packaging Engineer
The Studebaker-Packard Corp.

In many instances my better packaging ideas come from something I read in a packaging magazine. By reading the articles and editorials in the trade magazines, you can get the basis for ways of improving your package design, or for an entirely new design.

With new methods and materials coming into being every day, I consider it a necessary part of my day's work to study carefully those articles which are applicable to our type of packaging.

Of course, the men connected with our packaging-material suppliers play a vital role in helping solve our packaging problems.

A. George Sikorsky, *Package Engineer, Otis Elevator Co.*: Often when a package engineer says with pride, "I designed this package unassisted," he also will be the first to admit he is speaking purely of the design or application of the material and not the overall package. For successful packages are actually the combination of many sources of information. Certainly, one cannot discount the vast store of information contained in magazine publications, such as MODERN PACKAGING, where ideas are often triggered. Also, how could the engineer get along without the research, development and know-how of vendors indirectly or directly in



"95% use of Knox Glass due to 100% Knox Service" says large Pennsylvania dairy

A large Pennsylvania dairy* switched almost *exclusively* to Knox glass seven years ago.

Their assistant general manager tells why:

"Knox is flexible enough to give the very best service I have ever received from any of my suppliers. Their quality is good and whenever there have been any problems they have been quick and willing to assist us in finding a solution.

"When I order a load in here at 8:00 a.m. Tuesday, it is here when I want it — they don't give me any excuses about why it couldn't get here till Thursday or Friday."

This dairy — the largest in its area — has been in operation for 56 years and has recently re-modeled and modernized its entire plant.

They have found that the combination of modern equipment and quality glass containers pays off in annual increases in sales, profits.

Find out how Knox can meet your needs — with high quality glass, prompt, reliable service, and complete cooperation. Contact: Knox Glass, Incorporated, Knox, Pennsylvania.

*Name available on request.

the new/ **KNOX GLASS**

Question of the Month [Continued]

the field of packaging? Of course, there is the fine collective thinking derived from association with various organizations, seminars, expositions and packers.

Therefore, my best ideas are received from the huge domain of packaging information and my only requirement to enter this area is "necessity."



J. C. Sersen

Director of Purchases, Packaging
Purchasing Division
Curtiss Candy Co.

The art and science of packaging is gaining importance as an integral part, of necessity, in planning and doing business in today's modern markets.

To keep abreast of new developments, trends, new materials and equipment, one needs more than the supplier or salesman.

In this respect, periodicals, specific advertisements and the various packaging manuals or magazines are a constant source of information. One of these, **MODERN PACKAGING**, fulfills the mission.

In it, as in many others, the authoritative and specific presentation of new developments and ideas is helpful to a manufacturer in analyzing his own particular packaging for adaptation or change.

Sam Ash, Manager, Franshaw, Inc.: The handkerchief industry, in general, over the past few years, has shown a decline so that it becomes a challenge year after year to keep new ideas in style and appeal before the customer to continue our share of the trade. Along with this, new ideas in packaging, and easier and simpler methods of handling become a must because it seems to take more labor to do the same amount of business than it did in the past.

Handkerchiefs are being packaged and prettied up as they have never been done before and, as we see from other industries, the way the item is displayed and packaged means the difference between success and failure. Our most taxing problem has been the handling of our product when it is ready to be shipped to the stores, first in handkerchief boxes and then by the use of corrugated cartons or corrugated sheets as outside containers. By experimenting with different types and shapes and ideas that are presented to us and by not sticking to the old methods, we have been able to adopt quite a few items that are now indispensable.

L. P. Solomon, Vice President, Chicago Specialty Mfg. Co., (plumbing specialties): Generally speaking, we come up with most of our own packaging ideas. The general nature of our business more or less dic-

tates the type of packaging which will be acceptable to our trade. Radical departures from traditional styles, etc., are not normally quickly accepted by our trade and, of course, cost is most important. Our business is quite competitive and any increase in the cost of an item due to packaging must be carefully considered.

George A. Davis, Purchasing Agent, Revlon, Inc.:

Our packaging development is a combination of many factors. For instance, (1) the lab may develop a product that a package would have to go around, (2) marketing may need a type of package for a particular need, (3) packaging may wish to change for aesthetic reasons or (4) production may need a change for filling purposes.

A package is developed as follows: (a) packaging develops the concept of aesthetics, (b) lab approves of size and product compatibility, (c) marketing approves the sales approach, (d) engineering approves of durability, (e) manufacturing approves filling characteristics, (f) actual practical development is handled by purchasing with the approval of packaging, (g) the package is costed out to assure maximum appearance within allowable percentages and (h) the completed package is submitted to the packaging committee for final approval by its members.



Bernard R. Schmitz

Packaging Engineer
Emerson Radio & Phonograph Corp.

Even though my present major interest is in military packaging, I do read the monthly magazines covering the wide spectrum of packaging. Reading these from cover to cover, including every ad, I absorb many ideas, storing them in the back of my mind for future applications, which may differ considerably from the intended use.

It would be difficult to state just where the "best" idea came from as I do absorb ideas from visits to retail outlets, vendors, terminals and receiving docks. Yet, for scope and variety of stimulating ideas, I would classify the magazines, particularly **MODERN PACKAGING**, as the most consistent source.

If I have any criticism to make on the contents of the magazines dealing with this field it would be with the lack of articles dealing with "package management" as a distinct function of corporate general management.

Dean A. Broadhead, Vice President, N. K. Hurst Co. (packager of dried vegetables): Many of our packaging ideas and helps come from the various packaging magazines to which we subscribe. We feel that **MODERN PACKAGING** is a leader in this field. Our converters and printers of polyethylene film also give us many fine suggestions.

*another
prestige
product
packaged by BURT*

Set-up boxes by Burt. Wraps by The House of Harley.

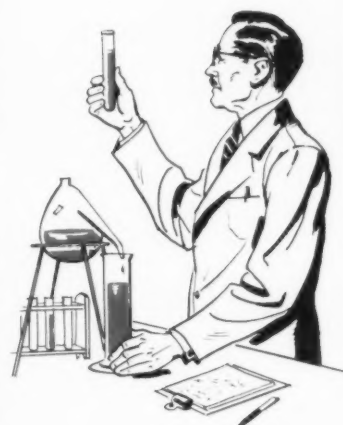


Burt Company, Inc. Manufacturers of Small Set-up Boxes, Folding Cartons, Transparent Containers. 500-540 Seneca St., Buffalo, N. Y.
as in Principal Cities or Write Direct. Canadian Division: Dominion Paper Box Co., Ltd., 250 Islington Ave. S., Toronto 18, Canada



Tri-Sure* Closures keep your products secure under any conditions . . . in any climate . . . for any distance.

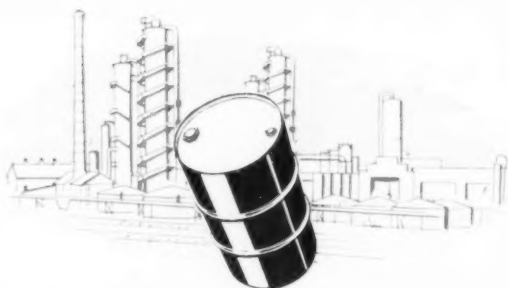
Good reasons to protect good products with **Tri-Sure® Closures**



In protecting your products in transit from leakage, pilferage and losses. Tri-Sure Closures help protect your investment in product research, refining, marketing.



Tri-Sure's world-wide reputation for dependability helps build good will, and increases the prestige of every product it protects.



Every drum that you fill and equip with Tri-Sure Closures will deliver *full* value.

*The Tri-Sure Trademark is a mark of reliability backed by over 35 years serving industry.



TRI-SURE THE WORLD OVER — plants, offices and affiliates all over the world are your assurance of prompt service wherever your plant is located.

AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.
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Tri-Sure Products Limited, St. Catharines, Ontario, Canada
Tri-Sure S/A Indústria e Comércio, São Bernardo Do Campo, Estado de São Paulo, Brazil
American Flange & Manufacturing Co. Inc., Villawood, N. S. W., Australia
Compañía Mexicana Tri-Sure S. A., Naucalpan, E. de Mexico, Mexico
B. Van Leer N. V., Stadhouderskade 6, Amsterdam, Holland
Van Leer Industries, Ltd., Seymour House, 17 Waterloo Place, Pall Mall S. W. 1, London, England

Technical & Engineering

Charles A. Southwick, Jr., *Technical Editor*Robert J. Kelsey, *Engineering Editor*

Heat-sealable polyester films

A report on a new family of oriented films

which offer this plastic's special properties with ease of sealing and bonding on one or both sides

*By Alfred H. Stepan**

Polyester films are relatively new in the packaging field. Polyesters themselves, however, date back to the earlier research by Carothers (1)¹, who opened the field of condensation polymers by his work on polyesters and polyamids as early as 1928. This research led to the discovery of polyethylene terephthalate by Whinfield and Dickson (2) in 1939-41. British chemists of Imperial Chemical Industries developed a polyester fibre known as "Terylene" from polyethylene terephthalate (3). Later, the Du Pont company purchased the U. S. patent for this product and subsequently developed its "Mylar" brand of polyester film (4). The introduction of this film into the packaging field was followed by new or modified polyester films from Goodyear Tire & Rubber Co. ("Videne") and Minnesota Mining & Mfg. Co.

The term "polyester" film is generally applied to polyethylene terephthalate—the polymer formed by the condensation reaction between ethylene glycol and terephthalic acid. Other polyester films, however, can be produced from polymers made by using hydroxy compounds other than ethylene glycol and aromatic dibasic acids other than terephthalic acid. By the proper combination of components, specific qualities can be incorporated into the film. The capabilities of the different polyester films depend primarily on the basic polymer from which they are derived and on the processing conditions. The functions of the basic films can be modified by various coatings or laminations.

Both oriented and unoriented polyester films are on the market. The advent of these polyester films has widely broadened the base for plastic-film usage. Unoriented polyester film is used primarily as a laminating film for the protection and upgrading of various surfaces. Because of the brittle nature of this type of film, uses for it in the unsupported state are limited in the packaging field.

Oriented polyester films are self-supporting films. Their main qualities are chemical inertness and exceptional tensile strength over a wide temperature range (9). Such films have been used in many areas of other packaging materials. These include many of the established areas of other packaging films, such as wraps, bags and carton windows. Some polyester films have been tailored through the orientation process to possess certain desired properties such as heat shrinkability.

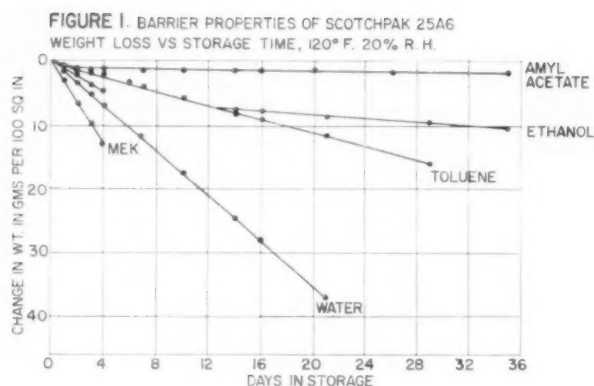
Wide market coverage by polyester film was at first hampered by its difficult heat sealability. Although several methods were developed to expedite sealing (5), none of the early methods was completely satisfactory. A 3M company invention has made possible a new family of oriented polyester films which are heat sealable on one or both sides. These films are referred to as "Scotchpak" Brand Heat Sealable Polyester films.

Properties

Transparent Scotchpak film is being produced in standard thicknesses ranging from 2 mils to 4.5 mils in the type that is heat sealable on one side (Type A). A 2.5-mil film is made which is heat

*Film Products Group, Research Laboratories, Minnesota Mining & Mfg. Co., St. Paul, Minn.

(Numbers in parentheses identify References appended.)



sealable on both sides (Type B). For difficult packaging applications, metalized film in a 2-mil caliper has been developed to provide excellent barrier characteristics.

Some of the properties of the standard Scotchpak films are given in Table I. A tensile strength ranging from 4,000-8,000 p.s.i. over the indicated caliper range gives these films the toughness and strength required for a variety of applications. In addition, the films have excellent flex life and good puncture resistance. Their high burst strengths and heat resistance provide ample safety in such uses as "boil-in-the-pack" applications.

Scotchpak films have excellent dimensional stability due to the absence of any plasticizer. Moisture absorption is negligible; therefore, the films will not be affected by changes in humidity conditions. Use temperature range is from minus 70 deg. F. to 240 deg. F.

Indoor aging has no appreciable effect on the films. Several experimental films have been prepared which give excellent outdoor aging. The standard films, however, are not recommended for prolonged outdoor exposure.

Permeability. For many packaging applications, the water-vapor and gas transmission values of a film are of considerable importance. Transparent Scotchpak films have a WVTR, at 100 deg. F. and 90% R.H., ranging from 0.5 gm. per 100 sq. in./24 hrs. for the 2-mil film to 0.2 gm. for the 4.5-mil film. The metalized film, No. 20A20, has extremely good barrier characteristics with a WVTR of less than 0.02 gm. In this property, the metalized film is rated higher than almost all types of barrier materials with the exception of aluminum foil. The latter, however, may lose some of its barrier properties when flexed, whereas No. 20A20 film does not do so.

Relative water-vapor-transmission and gas-permeability rates for several typical packaging films are shown in Tables II and III. It will be seen that the gas-permeability rates of transparent Scotchpak films are quite uniform for the various calipers; average transmission rates of oxygen and air are relatively low. The superior barrier characteristics of the metalized film are evident.

The use life of most of the standard Scotchpak films extends from minus 70 deg. F. to 230 deg. F. The special food film, No. 20A5, can be used safely up to temperatures of 240 deg. F. This film was developed primarily for the "boil-in-the-pack."

Heat sealability. The primary objective of early film research at 3M was the development of a heat-sealable polyester. The outstanding heat sealability of Scotchpak film is a result of this program. Heat seals can be made easily over a wide range of conditions. Thus, the film is usable in a wide variety of packaging machines. Its excellent machine-handling characteristics complement the heat-sealing property. Temperatures of 300 to 400 deg. F. and pressures of 20-60 p.s.i. are the best operating conditions. Extensive laboratory tests were made to determine these optimum heat-sealing conditions.

Table I: Properties of Scotchpak heat-sealable polyester films

Properties	Unit	Type 20A5	Type 25A6	Type 25B13	Type 45A10	Type 20A20*
Caliper	inches	0.0020	0.0025	0.0025	0.0045	0.0020
Tensile strength	p.s.i.	7,800	6,700	6,000	4,000	8,000
Elongation	%	200	200	200	200	200
Burst strength	p.s.i.	40	45	47	50	40
Tear strength (edge)	grams	650	700	700	900	650
Tear strength (Elmendorf)	grams	32	40	35	80	30
Specific gravity		1.03	1.00	1.00	0.99	1.04
Yield	sq. in./lb.	13,400	10,500	10,500	6,700	13,000
Yield	sq. yd./lb.	10.3	8.2	8.2	5.2	10.2
Resistance to cold	°F.	70°	70°	70°	70°	70°
Resistance to heat	°F.	240°	230°	230°	230°	230°
Heat sealable (300-400 F.)		1 side	1 side	2 sides	1 side	1 side

* Metalized

These studies indicated that above 400 deg. F. the bond was brittle and difficult to handle. If the dwell time and pressure were constant, it was found that the bond strength of the film decreased with temperature. The rate of decrease was dependent on the caliper of the film; e.g., the 4.5-mil film decreased from 15.6 lbs./in. width at 375 deg. F. to 5.1 lbs. at 275 deg. F. Under the same conditions (60 p.s.i., 0.5 sec.), the bond strength of 2.5-mil film decreased from 11.8 to 10.7 lbs. tensile. When optimum heat-sealing conditions are used, exceptional package strength results because the seal is as strong as the film itself.

The heat-sealable film surface has a high heat-sealed adhesion to many surface materials such as cloth, wood and paper. This property permits such diverse applications as protective laminations, laminations for liquid packaging and skin packaging.

Printability. The film can be printed on rotogravure and flexographic presses with commercially available inks. Films can be provided which have excellent ink adhesion to the heat-sealable surface. The non-heat-sealable film surface can be printed with inks recommended for polyester films.

Chemical resistance. Scotchpak film is resistant to the action of many chemical reagents and solvents. Although polyester films generally have the property of chemical resistance, it often has been difficult to obtain seal strength adequate to produce a safe and reliable package. Such diverse materials as motor oil, liquid detergents, paint pigments in oil, cosmetics and mastics have been successfully packaged in heat-sealable polyester. The chemical resistance of Scotchpak film permits the packaging of many solvents, including mineral spirits, turpentine and various hydrocarbons. The "boil-in-the-pack" application illustrates the excellent resistance to the effects of animal and vegetable oils as well as other food components from below zero deg. F. to 212 deg. F. Foods such as liquid shortening, butter oil and syrup have no effect on the film.

Certain materials such as absolute alcohols and low-molecular-weight ketones have been very difficult to package at high humidity and high temperatures. The packaging of such materials has been solved by the development of special films such as Nos. 45A27, 25B13 and 20A20. These are heavy-duty films possessing extremely low WVTR and gas permeability. The first two films are transparent.

Package size, storage life and conditions, and specific performance requirements are other important aspects of chemical resistance.

The capabilities of several Scotchpak films in containing a number of solvents under various conditions are illustrated in Figures 1 and 2. Bags were made up using No. 20A20 and No. 25A6 films con-

Table II: Water-vapor transmission rates of Scotchpak polyester and other films

Film	WVTR (90% R.H., 100°F.) (gm./100 sq. in./24 hrs.)
Scotchpak 20A5 (0.0020 in.)	0.5
" 25A6 (0.0025 in.)	0.4
" 25B13 (0.0025 in.)	0.1
" 45A10 (0.0045 in.)	0.2
" 20A20 (metalized, 0.002 in.)	0.02
Polyethylene, high density (0.001 in.)	0.25
Polyvinylidene chloride (0.001 in.)	0.25
Polypropylene, unoriented (0.001 in.)	0.7
Polyethylene, low density (0.001 in.)	1.2
Polyethylene terephthalate (0.001 in.)	1.6
Videne TC polyester (0.001 in.)	2.25

Table III: Gas transmission rates of Scotchpak polyester and other films

Film	Gas transmission rate* (cc./100 sq. in./24 hrs./ atmos. at 76°F.)	
	Oxygen	Air
Scotchpak 20A5 (0.0020 in.)	14.5	4.8
" 25A6 (0.0025 in.)	14.0	4.5
" 25B13 (0.0025 in.)	14.0	4.5
" 45A10 (0.0045 in.)	13.0	4.0
" 20A20 (metalized, 0.002 in.)	0.6	0.2
Polyvinylidene chloride (0.001 in.)	1	
Videne TC polyester (0.0004 in.)	4.5	
Polyethylene terephthalate (0.001 in.)	12	
Polypropylene, unoriented (0.001 in.)	97	
Polyethylene, high density (0.001 in.)	125	
Polyethylene, low density (0.001 in.)	550	

* For Scotchpak films, apparatus and method modified from that described by Van Amerongen, G. J., *Rubber Chem. Tech.* 20, 494 (1947).

taining the solvents amyl acetate, methyl alcohol, ethyl alcohol, methyl ethyl ketone, toluene and water. The bags were stored at the stated conditions. The graphs depict the weight loss per 100 sq. in. of film vs. time of storage at 120 deg. F. and 20% R.H. Other aging tests were conducted at 73 deg. F. (20% and 50% R.H.), and 100 deg. F. (53% R.H.). The data at extreme conditions give an indication of performance under severe conditions that could be encountered by a package in transit or in storage.

Aging tests have been conducted with the packaging of motor oil in several types of flexible packaging materials. The films tested included low-, medium- and high-density polyethylene and unoriented polypropylene. At 120 deg. F. and 20% R.H., all of the films except Scotchpak failed in a relatively short time. Failure was due not to heat seals opening, but resulted from the permeation of the film by the oil. This migration of the oil gave the outer surface of

the pouches a slippery, oily feeling. Obviously, any object or material in contact with such a package could easily become stained. Samples of motor oil in Scotchpak film pouches have been aged at the above conditions for a period of two years without any significant change occurring either in appearance or in package strength.

Applications

Food. The use of heat-sealable polyester film for food packaging has proved very successful. One application that emphasizes the chemical resistance of Scotchpak film as well as its good barrier properties is the "boil-in-the-pack." This application requires a film that is strong at both low and high temperatures (7). Foods frozen in bags are cooked by placing them in boiling water for a period of time. Obviously, the film must stand flexing in handling while cold and still maintain its seal and film strength at 212 deg. F. Certain foods will develop freezer burn in storage by dehydration. The low WVTR of Scotchpak film minimizes it. Oxidation of food in storage is kept to a minimum because of the low oxygen-transmission rate.

Medical and pharmaceutical. A flexible Scotchpak package for sutures is being used in place of the usual glass container. Barrier strength, controlled rigidity, chemical inertness and transparency are some of the important properties demonstrated by this application. Additional advantages accrue from savings in storage and shipping space and in the elimination of glass breakage. Scotchpak polyester films are suitable for radiation sterilization if that is necessary for a particular pharmaceutical. Film subjected to a dose of 5 megarads showed no degradation or discoloration.

Chemicals. The packaging of paint pigments in Scotchpak film by at least one company (6) demonstrates the capabilities of the film with such systems. These systems include pigments in oil as well as the multipurpose type. Systems similar to this are mastics such as caulking compounds, adhesives and

Table IV: Barrier properties of Scotchpak polyester films

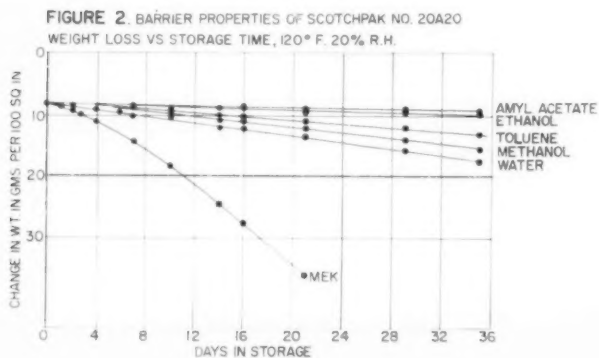
Product	Type of Scotchpak film	Transmission rate (gms./100 sq. in./24 hrs.)
75°F. & 50% R.H.		
Mineral spirits	25A6	0.001
Turpentine	25A6	0.001
Water	25A6	0.1
Water	20A20	0.01
Butyl cellosolve	25A6	0.05
Butyl acetate	25A6	0.01
Carbitol	25A6	0.01
Dowanol-17	25A6	0.005
120°F. and 20% R.H.		
Mineral spirits	25A6	0.01
	45A10	0.01
	20A20	0.001
Turpentine	25A6	0.01
	45A10	0.01
	20A20	0.001
Water	25A6	12.10
	45A10	7.30
	20A20	1.10
Butyl cellosolve	25A6	0.635
Butyl acetate	25A6	0.127
Carbitol	25A6	0.105
Dowanol-17	25A6	0.047

cements. These compounds contain a variety of solvents. To illustrate the chemical resistance and barrier properties of Scotchpak films to these solvents, the results of extreme aging conditions are listed in Table IV. Solvent-based colorants can usually be packaged with only a very slight loss. This loss at the extreme conditions of 120 deg. F. and 20% R.H. indicates that the weight loss at average storage conditions would not be significant during the normal shelf life of the package. The initial weight loss will usually be the maximum rate, since those liquid components with a higher vapor pressure will generally permeate more rapidly. Scotchpak film 25A6 appears to provide adequate barrier properties for the solvent-based colorants. Film No. 45A10 provides even better barrier properties, additional package strength and more rigidity; this gives assurance of maximum package performance during shipping and also when used.

Use of the film for products of the cosmetic type such as hair cream and hand lotion has illustrated the resistance of the film to various oils, light solvents, essential oils and perfumes.

Paper laminations

The high adhesion of Scotchpak film to paper makes it suitable for applications involving paper lamination. These appli- [Continued on page 162]



Measuring color difference

An automatic color-difference meter is found to be useful for simplified color matching and control, rapidly indicating changes needed

By David F. Menard*

Use of the Gardner Automatic Color Difference Meter for matching colors in the food, textile, leather and paint industries has been described in previous publications (1, 2, 3)[†]. However, a description of its use for printed decoration of metal articles seems to have escaped publication.

Consumer demand for better color matching and control has led to a search for methods better than those depending on the judgment of personnel. There are several variables affecting the judgment of even well-trained color matchers. These variables have been well described by Holle (4) as the effects of: substrate, gloss, visual angle, sample size, adjacent colors, eye fatigue, light source, emotions, attitude and age of the observer.

Like other metal-decorating industries, the collapsible-tube industry has felt the demand for better color matching, particularly in respect to the printing applied over the base coating. In 1930, Maerz and Paul (5) recommended a minimum area of 15 sq. in. for visual color matching. A collapsible tube with 15 sq. in. of solid print is extremely rare.

Several instruments for color matching were investigated. A recording spectrophotometer is generally recognized as the best instrument for measuring color, but the initial cost and training of personnel is not economically feasible for smaller metal decorators, such as those in the collapsible-tube industry.

The Gardner high-sensitivity, self-standardizing, automatic color-difference meter appeared to be in the medium-priced and medium-skill range and well suited to measuring small degrees of color difference. It indicates differences between a standard and trial batch in simple terms of white or black, red or green, and yellow or blue. It also gives some indication of the magnitude and direction of a variation in each of these color components between a trial batch and a standard.

Enameled steel plates, pre-standardized on a spectrophotometer, are available. Standardization is a

simple and rapid process. Most color differences are readily measured with the color-difference meter standardized against a white plate. For more precise control, colored plates that are spectrally similar to the trial batches being measured may be used. The effect of gloss is compensated for by the optical design of the instrument.

The standard exposure orifice is a 1½-in.-diameter circle for panels which are reasonably flat (no light leak between panel and the orifice). Special holders can be made for objects which cannot be flattened. Collapsible-tube walls are easily flattened, thus constituting no problem.

However, the printing on tubes seldom covers a solid 1½-in. circle. For smaller samples, a series of orifice cover plates with various sizes of orifices down to ⅛-in. diameter were obtained. Very satisfactory results were obtained with orifices of ¼-in. and larger. At ⅜-in. and ⅛ in. the results were useful, although there was some loss of sensitivity. This is characteristic of all color-measuring devices, including the eye.

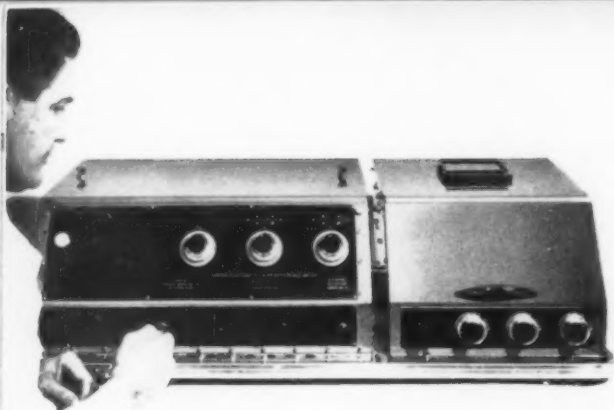
Recording colors

Color samples submitted by customers may be printed pieces of paper, printed paperboard boxes, colored plastic chips or decorated metal articles. The Gardner Color Difference Meter may be used to record target values for these color samples immediately. Any subsequent change in the color of samples due to age, oxidation, handling or other causes (even loss of sample) does not constitute a serious problem. When the eventual surface area of the printed article is unknown at the start, it is desirable to measure the customer's sample on as many different sizes of plate orifices as possible.

By using the visual lightness "L" scale, the total color differences, "ΔE," may be calculated if desired. However, for the purpose of this paper, the Color Difference Meter was operated on the three reflectance-value scales, "Rd," "a" and "b," which respond rapidly. The "Rd" dial indicates whiteness with values from zero to 100. The value of 100

* Wheeling Stamping Co., Wheeling, W. Va.

† Numbers in parentheses identify References appended.



The Gardner Automatic Color Difference Meter in use.

would be pure white and 0.0 would be pure black. The "a" dial indicates red or green with values from zero to 100. An auxiliary switch is pre-set for red (plus values) or green (minus values). The "b" dial operates in the same manner for yellow (plus) or blue (minus). Actually, no absolutely pure color exists (4).

The majority of the collapsible tubes have a white base coat applied prior to printing. Several tints of white are used. Examples of results on a blue-white and an ivory base coat are:

Dial	Blue-white	Ivory	Indication
Rd	81.8	80.5	Whiteness
a	-2.7	-3.0	Slightly green
b	-2.1	2.6	Minus for blue, plus for yellow

Print color matching

The customer's color submitted for print color matching was a 2-by-3-in. piece of white cardboard overprinted solid red. The largest solid area to be printed on the customer's tubes was slightly over 1/2-in. diameter. Therefore, the Color Difference Meter was standardized, using the cover plate with a 1/2-in.-diameter orifice, and subsequent work on this color was continued with this plate. The previously mentioned blue-white base coat was specified. Previous results had shown that an orange-red ink, "OR," was too dark and that a cream ink, "C," was too light, but that a mixture of these inks might be promising. The trial ink mixes were applied using a "normal" ink-fountain feed and again with slightly less than "normal" feed. The results obtained were as follows:

Ink mix	Rd	a	b	Remarks
Cardboard standard	25.8	72.4	24.2	Desired
5 parts OR, 5 parts C	22.4	79.3	26.2	Too dark, too orange
5 " " 5 " "	24.4	77.1	25.5	Less ink, still too orange
5 " " 6 " "	24.3	72.3	24.8	Better, slightly dark
5 " " 6 " "	25.6	71.5	24.3	Less ink, satisfactory

The final result showed less than 1.0 variation from the standard on each dial. This was satisfactory for the intended purpose. Actually, it is possible, and occasionally mandatory, to obtain closer agreement. In such cases, sets of "go" and "no-go" samples may be agreed upon by the customer and decorator in terms of what color-variance limits can be expected in production.

Quantity of ink applied

While it is very difficult for a printer to determine exactly how much ink is applied, the resulting color differences are readily measured. The following example is another red ink printed over a white base coat. As the quantity of ink was reduced, redness and yellowness decreased, while more white from the base coat showed through.

Ink feed	Rd	a	b
Practical maximum	12.5	78.7	19.4
Average	14.5	77.3	15.8
Practical minimum	16.2	74.0	13.0

Effect of base-coat color

The example is a blue-black ink, with the same press setting for both the blue-white and dark-yellow base-coated tubes. The dark yellow had a slightly reddish tint. The change of blue-black shade to a yellow-black with slightly less green is noted.

Base-coat color	Blue-black ink		
	Rd	a	b
Blue-white	1.9	-2.5	-5.0
Dark yellow	1.6	-2.1	1.9

Summary

1. The Gardner Automatic Color Difference Meter was found to be a useful instrument for color matching and control of printing inks on collapsible tubes. It is probably useful for other printed articles as well.

2. This Color Difference Meter gave a rapid indication of changes needed to match a standard.

3. The operation is relatively simple and the results are given in terms familiar to color matchers.

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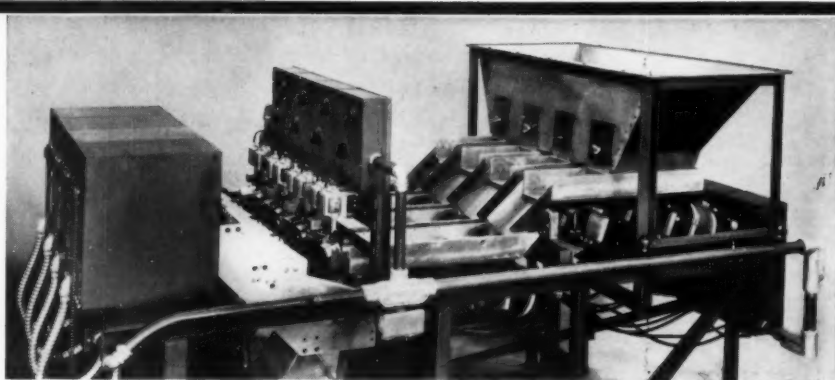
AT JACK'S COOKIE, BATON ROUGE, LA.

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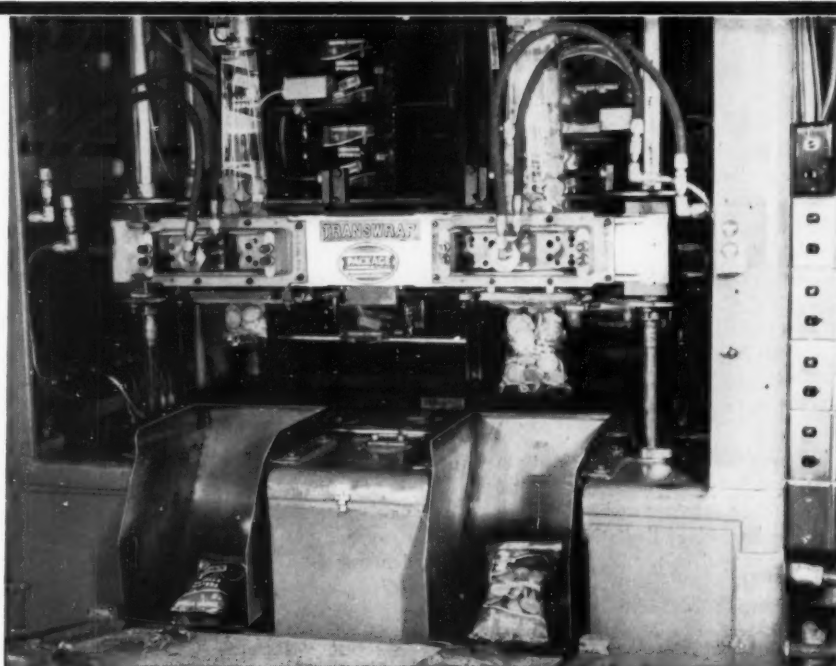


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Carbonated-beverage closures

Q: *We are large packers of carbonated beverages of all types. We use the conventional metal crown-type caps on our glass containers. We have been watching the increasing use of molded polyethylene caps and would like to try such caps for our products to reduce our costs and to provide an easier-opening closure for our products. Does this idea appear reasonable? If not, what are the problems or difficulties involved?*

A: Molded polyethylene caps are finding increasing acceptance as closures for many products in glass. However, carbonated beverages are unique, since they develop high internal pressures. The present crown-type cap is most satisfactory in both performance and cost.

Because of the internal pressures generated by the product in handling and shipping, a plastic cap would have to be designed with very thick sections. Also, a plastic cap would not have sufficient hold-down strength on the present glass finish, which is designed to accept a crimped metal cap.

Polyethylene and other plastics have been used as cap liners and this use appears to have some promise to reduce or eliminate the cork insert as a cushioning and sealing medium. However, today molded polyethylene caps do not appear to be possible competitors of metal crown-type caps for carbonated beverages because of limitations in performance and cost.

Mechanized deal packaging

Q: *As a packager of cosmetic and toiletry items, my company is constantly faced with assembling deal packages that require either a lot of hand labor or the building of a special machine costing more than \$4,000 which would be of no further use to us after the short promotion. Is there some standard machine that has the flexibility to handle different*

combination packs, even if it operates at a low production speed?

A: In the first place, deal packages take many forms and range from simple cartons and tape bands to complex paperboard constructions. Since there are a number of simple, inexpensive machines for taping and cartoning, we assume that you want something to handle the more complex carton and boot shapes.

If you are willing to design your deal packages within certain broad limits, there are several machines available today that will mechanize this operation. While these units generally cost more than \$4,000, they can be amortized over a large number of special promotions or can be leased, quite inexpensively, for the desired production period. Most of the units suitable for the complex promotional packages are classified as multipackagers and are rated at speeds of around 60 deal packages per minute. They are being used increasingly for deal packaging of household products and could be readily adopted for your purpose.

In most of this equipment, packaging action starts with a die-cut and scored blank, which is bent around the grouped product containers and fastened with locking tabs or a glue seal. Many machines are so flexible that they will handle crown and flat-top cans, round and square bottles, jars, aerosols and rectangular cartons. Some do not require change parts to switch the machine over to handle different types of containers.

There are several types of in-feed mechanisms that give horizontal or vertical packaging arrangements, which afford a great deal of flexibility and enable selection of a machine that will position packages in the desired pattern. Today, even premiums can be incorporated in these packs. And by tailoring the folding paperboard construction to the machine action, product contain-

ers of different sizes or of different shapes can very easily be combined in the same deal package.

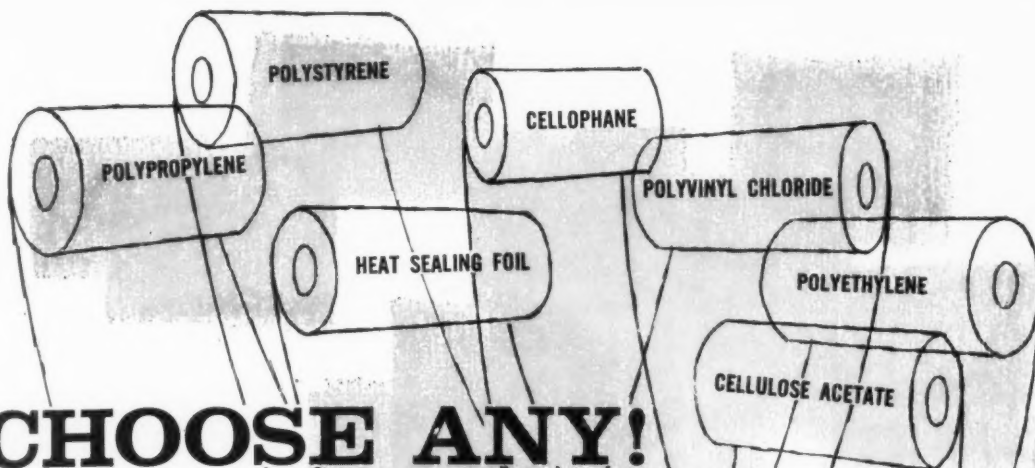
Packaging bacterial mixture

Q: *We make a bacterial mixture designed to accelerate composting by decomposing organic matter. This mixture is a free-flowing powder with the bacteria in a dormant state. The moisture content is not critical, but the mixture must not be completely dried out. The bacteria must have some oxygen. Since this mixture will attack cellulose, paper cannot be used.*

Can you offer us any suggestions for a material and a package that will protect this mixture? We would like to make this package in sizes ranging from a fraction of an ounce to several ounces.

A: The ideal material for your dormant bacterial mixture is low-density polyethylene film. This film has a relatively high oxygen permeability, good moisture-proofness and would not be affected by the bacterial action. A small, flat, heat-sealed bag or pouch of 1- to 1½-mil low-density polyethylene film should be well suited for product quantities weighing up to several ounces. The large surface area of a flat bag in comparison with the mass of the product should provide ample oxygen for the dormant metabolic requirements of the bacteria.

For any high-production requirements, package forming-filling-sealing equipment is available that will use either printed or unprinted rolls of polyethylene film. For small-production requirements or sampling, an unprinted bag can be purchased, filled by a simple filling machine and the top closed with a top heat-sealed label attached to the bag. One or more of these flat bags can be inserted in a printed folding carton to make a unit of sale and to protect the product physically in handling and shipping.



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Equipment & Materials

Economy package for frozen berries

Packaging-cost savings of up to 25%, plus greater labeling versatility, are among the advantages claimed by Western-Waxide for its new "Pouch-in-Carton" package for frozen berries and fruits packed in syrup or sugar. The new package consists of a heat-sealed pouch made of polyethylene-coated paper, a carton and an over-wrap. The polyethylene coating keeps liquids inside the pouch even when the fruit is thawed, says the supplier, to eliminate the need for relabeling, since the pouch-packaged fruit can be frozen in the carton, stored indefinitely, then over-wrapped as the pack is sold and shipped. In-plant storage requirements also are reduced because the new packages are shipped with the cartons collapsed and the pouch materials and overwraps on rolls. The company says also that the package is easy to open, requiring no tools. Extra convenience is available with the company's optional "C-Zip" tear string which is embedded in the pouch. *Crown Zellerbach Corp., Western-Waxide Div., San Leandro, Calif.*



Sealing device saves film

A cost-saving new feature has been added to its Verti-Pak automatic flexible-packaging machine, reports Mercury Heat Sealing. Called "Trim-Seal," it is an automatic sealing and cut-off attachment that is claimed to save up to 1 in. of film length per bag. The resultant savings in film cost are estimated at up to 15% by the supplier. *Mercury Heat Sealing Equipment Co., 2601-21 N. Howard St., Philadelphia 33.*

Coated milk carton and new filler

Ex-Cell-O's Pure-Pak Div. reports the development of a polyethylene-coated paper milk carton and a machine for forming, filling and sealing it. The company points out that the pre-coated carton will eliminate the need for wax coating to be applied to cartons at the dairy level and will also do away with the glue and wire staples now used to seal the one-piece Pure-Pak carton. The polyethylene-coated blanks are fed into the new machine, where they are formed and filled, then sealed with a heat-and-pressure method on an improved, lock-fold bottom and gabled top. The lock-fold bottom, says the supplier, is designed to strengthen over-all carton construction. *Ex-Cell-O Corp., Pure-Pak Div., 1200 Oakman Blvd., Detroit 32.*

Folding-carton scorebend tester

A simple, portable test instrument to measure the force needed to break open flat folding cartons is offered by Hunter Spring. Claimed to be extremely accurate, the instrument is designed to help carton manufacturers control production quality and eliminate rejects, the supplier says. The scorebend-testing device employs a direct-reading force gauge, column mounted to accommodate folding cartons up to 22 in. wide when flat. To perform the test, the flat carton is inserted on edge between the grooved base and the notched compression head of the

gauge. The operator then merely turns a knob to depress the gauge and force the carton open. The indicator hand on the face of the gauge holds the maximum dial reading to show the actual opening force exerted. A release tab resets the dial to zero. Three models of the scorebend tester are available, for varying degrees of force. *Hunter Spring Co., Lansdale, Pa.*

Die-cut unit film packages

A method of die cutting and heat sealing small products in packages of unusual shapes—called "Facsimile Packaging"—has been developed by Ivers-Lee. The company says it now can offer flexible-film unit packages in shapes that duplicate in miniature any bottle, box, tube, trademark or promotional design. Liquids, solids or powders can be packaged in this way, in a variety of thermoplastic materials. According to the supplier, its new technique considerably reduces the size and weight of individual packages, for appreciable savings in the costs of packaging, handling and distribution. *Ivers-Lee Co., 215 Central Ave., Newark 4.*

Dual-length electric taping unit

Ready-to-use sealing tape in predetermined lengths ranging from 4 to 72 in. can be dispensed by Nashua's Model 98 Dual Length Electric Tapper. Operated by pushbutton or foot switch, the unit dispenses two different lengths of tape. This action, says the supplier, speeds up package sealing and affords economy, since one machine does the work formerly requiring two. The machine accommodates standard-diameter rolls of tape in rolls of up to 4-in. width. *Nashua Corp., Nashua, N.H.*

Material-slitting machine

Comet's new material-slitting machine is claimed to offer extreme slitting accuracy on paper, paperboard, thermoplastic sheet and other packaging materials. Two models are available: the C-36, with a cutting width of 1 to 36 in., and the C-48, with a cutting width of 1 to 48 in. Adjustable guide bars are provided to accommodate various material widths. Infeed and outfeed aprons can be detached when the unit is used in line with other equipment. *Comet Industries, Franklin Park, Ill.*

Moistureproof corrugated shipper

A moistureproof corrugated container for shipping eviscerated fowl is available from Stone Container. Called Control Pak, the container is impregnated with inert petroleum resins which, the company says, gives it the ability to shed processing water and poultry body fluids so that the corrugated board remains sturdy for handling, transit and storage. No inner lining is required. Small slots in all eight corners of the container permit free draining of fluid from any position. Other cited advantages of the treated corrugated container are: uniform and lighter container weight, protection against shock, complete product enclosure, better temperature control and easier, safer handling. *Stone Container Corp., 4200 W. 42 Pl., Chicago 32.*

Midget container imprinter

Gottsch's new midget imprinting device attaches to a conveyor and automatically imprints prices, codes or other data on jar lids at a rated speed of up to 100 per minute. Mounted to overhang the conveyor, the imprinter works on flush lids as well as recessed (up to $\frac{3}{32}$ in.) closures. Special ink-feed and impression controls are said to eliminate the need for adjustments. *Adolph Gottsch, Inc., Hillside, N.J.*

Hydraulic and vacuum web guides

Stanford Engineering is now offering its "110" series of automatic web guides in hydraulic as well as vacuum models. The company points out that the former is recommended for in-



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*Lewis B. Woolman, Director of Marketing
Sterling Plastics Co., Union, N. J.*

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Equipment & Materials (continued)

stallations requiring greater power (as in the case of foil and heavy board), while the latter provides faster response. In either type, the supplier says, any deviation in web path is instantly perceived by a special sensing head and transmitted by a signalling mechanism to an actuator, which repositions the guide rolls and thereby restores the web to its proper path. The company's "110" series of web guides is available in three basic models: the "110," for guiding the web in its existing plane; the "180," which covers applications requiring a full 180-deg. change in direction, and the "90," for applications requiring a change from horizontal to vertical. *Stanford Engineering Co., Salem, Ill.*

Unit inserts aerosol valve assemblies

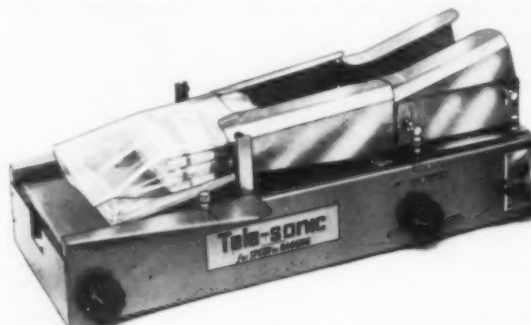
A new machine that automatically inserts aerosol valve assemblies into cans at reported speeds of up to 150 a minute is available from PMC. The RI-1200 is a continuous, rotary-motion, 12-station unit. In operation, it takes valve assemblies from a bulk supply, sorts them and automatically inserts them into the cans. A specially designed guide mechanism assures positive control of the dip tube and positive insertion of close-fitting assemblies, the supplier claims. Also available is an attachment that automatically orients the dip tube with the printing on the can. *PMC Industries, Hackensack, N.J.*

New vertical case sealer

New from Midnight Engineering is a vertical case-sealing machine that is reported to operate at speeds of 35 or more cases per minute. Both a top and bottom sealer, it is only 64 in. long—claimed to be the shortest high-production case sealer commercially available. While being sealed, filled cartons are pneumatically lifted for overhead conveying. Discharge to conveyors can be in any 90-deg. direction. According to the supplier, the machine's design affords static pressure over the entire surface to be glued, for glue savings of about one-third. In the sealing operation, gaps between carton flaps are eliminated. *Midnight Engineering Co., 701 S. La Salle St., Chicago 5.*

Semi-automatic baler-bagger

Engineered for single or multiple packaging of a variety of soft-goods products is Tele-Sonic's new semi-automatic baler-bagger machine. Accommodating such materials as polyethylene and polyester films, paper or cellophane, the machine



is reported to operate at speeds of up to 1,000 baled packages per hour. The company points out that the new unit produces an attractive, tight-to-package fit at low material cost. It can be integrated into existing packaging lines without special installation. Four models of the machine are available, to accommodate bags ranging from 2 to 22 in. in width. *Tele-Sonic Packaging Corp., 208 W. 27 St., New York 1.*

Textured tags for fabrics

Dennison's new "Tex-Tur" tags for garments and other fabric products are offered in a variety of applied textures designed for greater appeal at the point of purchase. The textured patterns available include leather, woodgrain, pebble, cross-hatch and floral. *Dennison Mfg. Co., Framingham, Mass.*

Improved cup-package cover

Lily-Tulip says its new Opaque Overall polystyrene cover for cup packages has been designed to meet the demand for a sturdy, economical lid that will provide a sanitary and effective closure. The cover is suggested for use by packagers of such dairy foods as cottage cheese and sour cream, as well as prepared foods and salads. According to the company, the lid is resistant to moisture, water and vapor, and is dimensionally stable against shrinkage or expansion. Other cited features: The lid permits efficient automatic capping, positive closure and reclosure, and crisp, legible printing because of its smooth surface. It is available in sizes to fit the supplier's 6-, 8- and 12-oz. squat "Nestrite" containers; 12- and 16-oz. intermediate containers, and 32-oz. tall containers. *Lily-Tulip Cup Corp., 122 E. 42 St., New York 17.*

Precision measurement of sheet materials

More precise thickness measurement of such compressible sheet materials as plastics, paper and paperboard is possible with its new motorized dead-weight dial micrometer, says Testing Machines. The new unit reportedly assures that the dead-weight measuring load is always applied in the same way with exactly the same p.s.i. pressure. Measuring anvils are lapped flat stainless steel, with the lower anvil adjustable (by three lock screws) to obtain exact parallelism of the measuring surfaces. Use of the device, the company points out, leaves the operator's hands free to handle the sheet and write down the readings from the dial. Cycling time for each measurement is 5 sec., according to the manufacturer. *Testing Machines, Inc., 72 Jericho Turnpike, Mineola, N.Y.*



Rotary filler with rapid change-over

Pfandler's new 14-station rotary piston filler is claimed to reduce height change-over time up to 80% because it is so constructed that both bowl and cam ring remain undisturbed during adjustment. In the fast five-stage change-over procedure, the operator (1) raises pistons and removes p'ugs, (2) turns filler bowl to new height, (3) sets piston and valve cam ring by adjusting support leg screws, (4) replaces valve plugs and lowers pistons into position and (5) closes the valve-cam-ring access door. Designated the RP-214, the machine is reported to operate at speeds of up to 400 cans per minute, with accuracy within 1/10 fl. oz. *The Pfandler Co., Div. Pfandler Permutit, Inc., 1000 West Ave., Rochester 3.*

Hinged spout and valve for aerosols

A new spout-and-valve unit for aerosol containers, designed specifically for use with food toppings and foam products, has been introduced by Precision Valve. The "upside-down" assembly has a hinged spout which permits fast, easy cleaning of both valve and spout after use, without having to remove either part from the container. *Precision Valve Corp., 700 Nepperhan Ave., Yonkers 3, N.Y.*

Moisture-retaining molded-pulp tray

A molded-pulp tray package for fresh chickens, claimed to retain its moistureproofness and rigidity for long periods, has been introduced by Diamond Gardner. The company's "Chic-tainer" has 12 moisture-trap pockets per square inch of its surface, to catch and hold moisture seepage from the chicken. *Diamond Gardner Corp., 122 E. 42 St., New York 17.*

Speedy container side-wall printer

Its new automatic imprinting machine prints data on the sides of vertically positioned cylindrical items at speeds of up to 200 per minute, claims Van Buskirk. The portable unit is available in various models, to print metal, plastic or paperboard cylindrical containers ranging from 1/2 in. to 10 in. in diameter. Offered as an optional accessory is an electronic registration control system that is reported to assure accurately indexed imprints. According to the supplier, type changes can be made quickly and easily, and rapid color changes are facilitated by

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Equipment & Materials (continued)

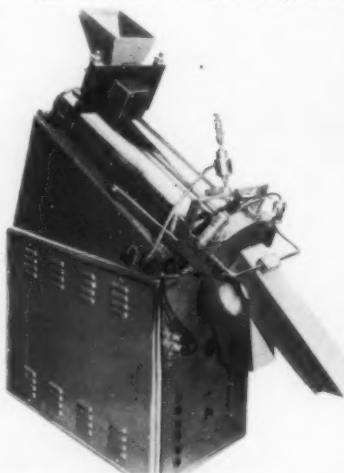
a removable ink system. Because the working parts of the pump do not come into contact with the ink supply, they do not require cleaning, the manufacturer points out. *Van Buskirk & Co., Inc., Bridgeport, Conn.*

Aerosol valves applied at 120 per minute

Application speeds of up to 120 valves per minute are reported for Consolidated Packaging Machinery's Model H-O-FV, a machine that sorts and applies all types of aerosol valves that do not require dip tubes. The unit includes a sorting hopper, conveyor and inserting mechanism. It is equipped with a variable-speed drive so that machine speed can be synchronized with that of other equipment in the packaging line. According to the supplier, cans of the same diameter but of varying heights often can be handled with the same star-wheel arrangement. *Consolidated Packaging Machinery Corp., 1400 West Ave., Buffalo 13.*

Electromechanical selecting devices

Creighton & Partners, Ltd., of London has organized Gromax, Inc., as North American distributor of its line of electro-mechanical selecting devices. The first of these machines to be offered for sale here is the Gromax Selector Type "C" (shown), which sorts particles of any shape—up to 1 in. diameter—according to size and color. According to the supplier, the selector's accuracy ranges between 95 and 99%. Selection is done by two photoelectric cells which scan each item. Because only four moving parts are used in the selector, maintenance is reduced sharply, the company points out. Rejected particles are drawn off by an air valve capable of cycling up to 120 times per second. *Gromax, Inc., 17 Battery Pl., New York.*



More protective bacon package

Marathon's new "Zip-Seal" window carton for bacon offers the benefits of easy opening, accessibility and protective reclosure. At reported production speeds of up to 50 lbs. per minute, the cartons are automatically formed, closed and sealed on a special machine. Filling is done manually. The carton window is polystyrene film for greater rigidity and resistance to moisture and temperature changes, the supplier points out. *Marathon, Div. American Can Co., Menasha, Wis.*

New line of fibre drums

Bennett Industries has begun production of its new "Speedy-Pak" fibre drums. Their construction embodies Fourdrinier kraft linerboard side walls and cold-rolled-steel ends with baked-on varnish coating. Closures are conventional clip-type lugs attached to the drum body. The drums, which can be stacked vertically, are available in four sizes, with capacities of from 2 to 26 gals. *Bennett Industries, Peotone, Ill.*

Improved epoxy plasticizers

A series of epoxy plasticizers said to have built-in stabilizing properties has been developed by FMC. Called alkyl epoxyhexahydrophthalates, they are claimed to combine the excellent sta-

bilizing properties of the epoxy fatty-acid esters with the good over-all plasticizing properties of the phthalates. According to the supplier, they protect polyvinyl-chloride resins from degradation by heat and light, and show outstanding compatibility with PVC at high-concentration use levels. As combination stabilizers and plasticizers, they are applicable to a wide range of vinyl resin formulations and products, including packaging materials, the company reports. *Food Machinery & Chemical Corp., Becco Chemical Div., Buffalo 7.*

Cost-saving starch for corrugated

Now available in commercial quantities from National Starch is Kobond, a cold-water swelling carrier starch designed for use in the corrugating industry. The pre-cooked starch is simply added to cold water and mixed, for a 50% saving in plant preparation time, the supplier says. The material reportedly increases adhesive efficiency by retaining almost three times as much water as conventional cooked carrier starch. A decrease of up to 20% in adhesive costs results, says the company. *National Starch Products, Inc., 750 Third Ave., New York 17.*

Lightweight polyurethane cushioning material

K-Foam, a low-density, moldable package-cushioning material made from polyurethane, is available from Henry B. Katz Industries. According to the supplier, the lightweight material offers adequate protection for delicate instruments and other products, yet permits reduced tare and cubage. In addition to reducing cubage by 20%, the material also is reported to be non-abrasive, non-hygroscopic, non-toxic and flameproof. *Henry B. Katz Industries, 859-879 Summer Ave., Newark 4.*

Custom filling in portion packages

A complete custom-filling service for products in unit-portion cups or pouches is offered by Unit Portions, Inc. The company reports it is now accepting contract-filling work in a broad range of packages and packaging materials. Core of the new service is a rigid, transparent-plastic cup of ½-oz. capacity. It can be filled with almost any material that can be pumped, the company says, then sealed with a thermoplastic or foil closure. The supplier's alternate package, a rectangular pouch, is available in a variety of materials, including transparent plastics, paper, foil or combinations. *Unit Portions, Inc., 176 Cherry Valley Rd., West Hempstead, N.Y.*

New vacuum-filling machine

A filling machine claimed to employ an entirely new principle of vacuum filling is available from Horix. The company's Gravic filler uses standard gravity-filling valves and is adaptable to either vacuum or gravity filling, depending on the product. The new unit insures positive and accurate filling of liquids and eliminates the overflow or return system inherent on conventional vacuum fillers, the supplier says. *Horix Mfg. Co., Corliss Station, Pittsburgh 4.*

Economical carton-bottom stitcher

Ideal Stitcher's Model WS-1B-1240 carton-bottom stitcher forms and drives staples from a 25-lb. coil of wire. The electrically powered unit produces 12,500 staples at a cost far below that for the same quantity of pre-formed staples, the company claims. The staples formed—up 1½-in. crown width—are reported to reduce by half the time needed to close a carton bottom and also to increase the rigidity of the finished package. Available as optional equipment is an attachment that controls the placement of staples. *Ideal Wire Stitcher Co., Div. W. R. Pabich Mfg. Corp., 2323 N. Knox Ave., Chicago 39.*

Dual-head hot-stamping machine

An improved hot-stamping machine that incorporates two marking heads, driven by a variable-speed motor and has a new dial-feeding system, is available from Acromark. The dual hot-stamping heads on the Acromark Standard 2AH have individual dwell and pressure controls, and may be used for marking two different colors at the same time. The unit's 20-station dial feed can be operated manually or automatically and is extremely easy to load, the company reports. The machine's operation begins and ends by pushbutton. Each hot-

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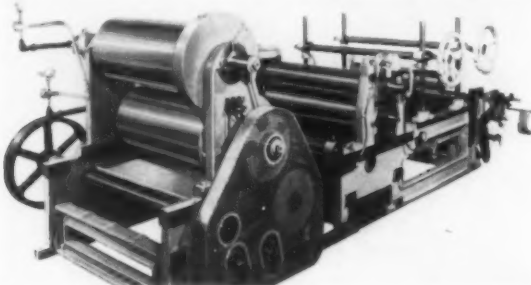
stamping head has its own temperature control and transfer foil automatic advance. These features assure perfect marking in color, says the supplier. *The Acromark Co., Elizabeth, N.J.*

Automatic liquid-weighing unit

Several advantageous new features are embodied in its new automatic liquid-weighing unit, says Glengarry Processes. The device is claimed to operate in a range of 1 oz. to 10 lbs. and to have an output of up to 10 weighings per minute. Pneumatic or electrical controls are available for semi-automatic or fully automatic operation. The weigh tank is completely shrouded, with the weigh beam entering the shroud through a sealed diaphragm. All contact parts are stainless steel. *Glengarry Processes, Inc., Bay Shore, N.Y.*

Improvement in paper-waxing machines

Potdevin reports that a new cooling principle incorporated in its Model 77 NB paper-waxing machine eliminates many of the time-consuming operations needed for making waxed



bags with conventional machinery. The unit (used in tandem with a bag-making machine) applies two-side wax coatings of variable weights to heavy or light papers. Wax is applied by dipping the web into molten paraffin, then running it between the squeeze rollers. Chilling the web by a new process, says the company, results in an even, wet wax surface on both sides. According to the supplier, the waxed sheet remains pliable as it moves easily over the bag former and the temperature of paper and wax as they enter the bag maker is cold enough to reduce the tendency of wax to mar, scuff or pick off on bag-machine rollers. *Potdevin Machine Co., Teterboro, N.J.*

Cost-cutting polyethylene bottle

Plax Corp. has added a 1-gal. plastic utility bottle to its line of industrial containers. The new unit, square in cross section with rounded corners, is available in both conventional and high-density polyethylene. According to the company, substantial savings in freight and shipping-carton costs are effected by the new container's extremely light weight and its 37% reduction in cubage compared with the traditional round shape. *Plax Corp., Hartford, Conn.*

Fast steel-strapping machine

A. J. Gerrard is offering its Model 2700 fully automatic flat steel-strapping machine for the closure of corrugated cartons, fibre boxes and wooden cases. It is claimed to operate at up to 17 ties per minute and to compensate tension automatically for variations in package size. It can handle packages ranging from 4 in. high by 8 in. wide to 22 in. high by 20 in. wide or 15 in. high by 26 in. wide. The electrically operated unit accommodates light- or medium-gauge strapping in widths of $\frac{3}{8}$ or $\frac{1}{2}$ in. and is reported to make 7,500 ties without reloading. *A. J. Gerrard & Co., Melrose Park, Ill.*

Liquid filler for small containers

Climax Products is introducing an automatic rotary vacuum liquid filler in the 4-oz.-and-smaller size range. Known as the VF 8M, it is an eight-stem model that is reported to fill liquids of varying viscosities at speeds of 100 or more containers per minute. Claimed to offer trouble-free operation because of its

simplicity of design, the new unit is suitable for filling such liquid products as cordials, chemicals, waxes, solvents, inks and hair tonics. *Climax Products Div., The Lodge & Shipley Co., 3055 Colerain Ave., Cincinnati 25.*

Electronic counting unit

Counting speeds of 1,500 units per minute are claimed for the Robot-Eye RE-8 Photo-Electronic Counter by its maker, Standard Instrument. The unit counts by interrupted or reflected light beam; there is no physical contact with the objects to be counted. It consists of three units—an amplifier-counter, a photocell and light source. The counter has six-digit capacity. *Standard Instrument Corp., 657 Broadway, New York 12.*

For non-skid containers

A colloidal silica that is claimed to add strength and anti-skid properties to paperboard containers is being introduced by National Aluminate. Called Nalcoag, the material is offered as an aqueous suspension of 15, 30 or 35% silica, or as an aqueous-alcohol suspension of 22% silica. It can be applied as an additive during manufacture or as a surface coating to impart non-slip characteristics that facilitate stacking and handling of paper and paperboard containers, the company says. Details are contained in an eight-page bulletin which is available on request to the supplier. *National Aluminate Corp., 6216 W. 66 Pl., Chicago 38.*

Protective tray for meats

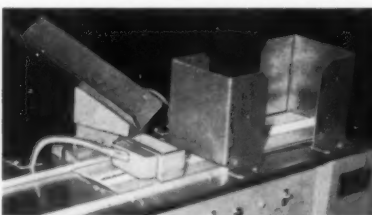
Wallace Corp. is offering a new blue-white cylinder-board food tray that is claimed to be tear resistant and to be chemically treated to prevent fresh meat from losing its bloom in the package. *Wallace Corp., Richwood, Va.*

Resinous solution for aerosol packagers

Reported to be suitable for a wide range of aerosol-packaging applications—primarily in the paint and coatings field—is Diamond Alkali's resinous solution, "Darasol." According to the company, the alcohol-resistant material is non-flammable, provides a low odor factor and eliminates aerosol-valve clogging or the need for special valve treatment. It also prevents pigments and other coloring materials in aerosol formulations from settling into solid masses in the container, the supplier claims. The material is available in various colors, in 1-, 5- and 55-gal. drums. *Diamond Alkali Co., Chlorinated Products Div., 300 Union Commerce Bldg., Cleveland 14.*

Packaging of electronic components

The Hiltromatic Automatic Loader, together with a specially designed series of packages, is claimed by its manufacturer, Hill Mfg. Co., to give electronic-component makers a new



method of packaging and handling all types of axial lead components. The unit is shown packaging glass diodes into slotted tray packages. Parts feed down the V-

chute and are automatically placed in the tray slots. The trays are fed into loading position from the box hopper at right. According to the supplier, components can be packaged in this manner at speeds up to 8,000 pieces per hour. The automatic loader reportedly will operate from zero rate of feed up to maximum without adjustment. *Hill Mfg. Co., Lyndonville, Vt.*

Extruded plastics materials offered

Anchor Plastics announces that it can now offer a complete line of aerosol dip tubes. Included are tubes extruded from polyethylene, nylon, polypropylene and polycarbonate—a thermoplastic that can be steam sterilized, offering potential packaging applications in many fields. Also available from the company are clear-plastic (both acetate and butyrate) extruded clips for attaching to die-cut cards such items as pens, lip-

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Equipment & Materials (continued)

stick cases and small perfume vials. The clips are supplied pre-cut to customer specifications and range in price from $\frac{1}{8}$ to $\frac{1}{4}$ cent each, depending on their length, size and thickness. *Anchor Plastics Co., 36-36 36 St., Long Island City 6, N.Y.*

Pressure-sensitive polyurethane foam

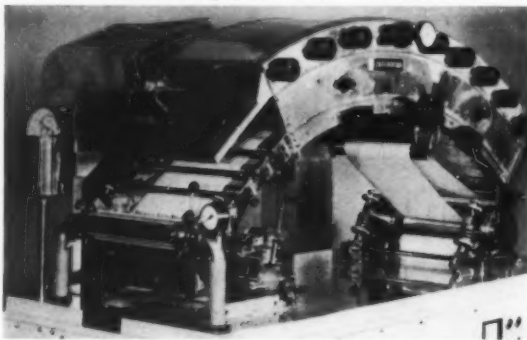
A pressure-sensitive polyurethane plastic foam that adheres to almost any surface after removal of its backing sheet is offered by Air-O-Plastik. Suggested for a wide range of applications, including package cushioning, the material's properties are said to include: extremely light weight, excellent resilience, good insulation, resistance to temperature extremes, chemical inertness, resistance to corrosion and mildew, and imperviousness to water and oils. The material is available in varying thicknesses, sizes and colors. It comes die cut to specifications as well as in standard rolls, blocks or sheets, the supplier reports. *Air-O-Plastik Corp., Union City, N.J.*

Easy-off end label for bread wrapper

Western-Waxide has introduced an easy-to-remove end label for bread wrappers under the trade name "E-Z Open." The end label strips off easily when pulled downward by the user. Because the label does not tear the wrapper, the company points out, the wrapper can be reclosed securely to protect the bread's freshness. The label can be applied to wrappers made of waxed paper, foil or cellophane, says the supplier. *Crown Zellerbach Corp., Western-Waxide Div., San Leandro, Calif.*

Laboratory coating machine from Germany

A new laboratory coating machine has been released for sale in the U.S. by Jagenberg-Werke AG, Düsseldorf, West Germany. It accommodates paper, board, foil or fabric in 12-in.



webs. According to the supplier, a wide range of coatings can be applied by a one-, two- or three-roller coating station in connection with air knife, smoothing rolls, a combination of both or reverse-roll coating system. An attachment is available for heat-seal laminations. The pushbutton-controlled machine is equipped with dials for fast, easy reading of production data. Operation and maintenance are reported to be very simple. Further details are offered by the American agents: *American Paper & Pulp Co., 300 Fourth Ave., New York 10; Pearce Development Co., 1606 E. 30 St., Cleveland 17.*

New supplier of acetate sheet

Freeport Plastic Sheet reports that it is now making available its Formula 88 transparent cellulose-acetate sheet. According to the supplier, the formula is particularly suitable for applications where clarity, dimensional stability and shelf-life properties are required. The material is being produced in thicknesses of 5 mils and up, in sheet and roll form. *Freeport Plastic Sheet Corp., Freeport, N.Y.*

New wire-fastener machine

A machine that automatically forms and inserts loop-type wire fasteners (for use in sealing corrugated or folding boxes) has been introduced by Theodore M. Wright, Inc. The machine will

form and drive up to 150 fasteners per minute and will make 1,250 fasteners per pound of wire, the supplier says. The unit operates automatically when the board is positioned. An interlocking circuit also can be provided for dual operation. According to the company, the deep penetration of the loop-type wire fasteners provides maximum protection of the board when bending the loop and also assures high pull-out strength. *Theodore M. Wright, Inc., Camden, N.J.*

Automatic corrugated-carton printer

Pannier points out that its new in-plant automatic knock-down corrugated box printer offers packagers savings in storage space and box inventory. The unit accommodates cartons up to 21 in. wide by 32 in. long and prints at reported speeds of up to 2,400 impressions per hour. Its measurements are 3 ft. wide, 10 ft. long and 57 in. high, so it can be stored easily until needed. *The Pannier Corp., 207 Sandusky St., Pittsburgh 12.*

Speedy flexographic press

Its new flexographic press is designed for 20,000-sheets-per-hour operation, says Hess & Barker. The press takes a 22-in. maximum web and has a cylinder circumference and cut-off range of from 10 to 20 in. Custom models of the basic design can include any combination of multicolor flexographic printing, embossing, perforating and other converting operations, according to the manufacturer. *Hess & Barker, 930 Washington Ave., Philadelphia 47.*

Automatic container-top stapler

Stapling speeds of 400 per minute are claimed by Container Stapling Corp. for its Model P-LH Clip-Top Packer. The unit is equipped with an automatic mechanical trip which clenches the staple, then retracts automatically. The machine reportedly sets up shipping containers for loading in a few seconds. It has an adjuster screw for adapting to any thickness of corrugated board. According to the manufacturer, no air cylinder, lubricator or filter are required in the machine's operation. *Container Stapling Corp., Herrin, Ill.*

Sewing unit for paper bags

An automatic bag-closing machine, said to operate at speeds of 30 paper bags per minute, is available from Dave Fischbein Co. The unit is designed so that the bags themselves initiate the sewing operation when they reach the sewing head. The thread is cut off automatically after sewing is completed. *Dave Fischbein Co., 2720 30 Ave. S., Minneapolis 6.*

Steel strapping without seals

A sealless strapping device, engineered for handling ease and convenience, is available from Inland Wire Products. The new unit locks the strap by crimping, thereby eliminating the need for applying seals. The result, says the manufacturer, is a saving in time and money in steel-strapping operations. *Inland Wire Products Co., 3947 S. Lowe Ave., Chicago 9.*

Fast bag-tying machine

The new Bunn bag-tying machine is suggested for use in a variety of applications, from packaging produce and groceries to hardware. The machine operator places the filled bag into a specially designed trough, twists the end of the bag closed and steps on a foot trip. The tying arm of the machine then encircles the bag's neck, automatically ties a double-loop knot and cuts the twine. The entire bag-tying operation takes 4 sec., from first step to last, the company says. *B. H. Bunn Co., 7605 Vincennes Ave., Chicago 20.*

Two-tone color-printed linerboard

Designed to provide customers with more distinctive packaging, mottled-color linerboard now is available from Banner Fibreboard. Standard two-tone marbled colors now offered include blue, yellow, white, red, green, orange and purple. Other color combinations can be created to order, the supplier says. According to the company, the exterior mottled-color design provides a pleasing background for a packager's printed sales message. *Banner Fibreboard Co., Wellsburg, W. Va.*

FREEZE IT...



OR BOIL IT!

New "Scotchpak" Heat-Sealable Polyester Film
withstands -70° to 240°F temperatures

3M Research Laboratories now give you a clear-as-glass packaging film designed especially for the food industry—a film with a combination of properties unlike any other film on the market.

This new "Scotchpak" Film resists freezing cold (down to -70°F) and boiling heat (up to 240°F)—yet can be heat sealed at 300° to 400°F . with only 20-60 psi in 0.2-2.0 seconds. It blocks ultra-violet rays—gives longer shelf life to all food products.

"Scotchpak" is *tough* and has higher seal strength than any other film. It can be easily handled on conventional bag making and filling equipment. Still, "Scotchpak" is priced competitively with existing so-called "boil-in-the pack" films. It is available in a 2 mil thickness in rolls up to 50 inches wide, ready for printing—if you desire.

For complete facts and figures on this dramatic new food packaging development, write 3M, Dept. TD-39, St. Paul 6, Minn. Do it *today*!

"SCOTCHPAK" is a registered trademark for the heat sealable polyester film of 3M Co., St. Paul 6, Minn. Export: 99 Park Avenue, New York 16. Canada: London, Ontario.

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SCOTCHPAK Polyester Film

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Plants & People

L. W. Sutherland has retired as chairman of the board of Sutherland Paper Co., Kalamazoo, Mich. He is succeeded by William Race, who in turn is suc-



Race Smith Sutherland

ceeded as pres. by E. Wendell Smith, former secy.-treas. of the company. With his brother, Mr. Sutherland founded the firm in 1917 under the name of Kalamazoo Sanitary Carton Co. He will remain a member of the board as well as chairman of the exec. committee. In other appointments, J. T. Kirkpatrick becomes v.p. of marketing and a board member, and A. L. Sherwood becomes v.p. of research and engineering.

West Virginia Pulp & Paper Co., New York, has decentralized its Hinde & Dauch Div., Sandusky, O. The plan calls for the formation of four regional organizations—at New York (managed by John B. Wyatt), Chicago (managed by Charles D. Sparks), Sandusky (managed by George T. Henderson) and Richmond, Va. (managed by Louis R. Lawson, Jr.). The managers of these regional offices will coordinate the sales, production and administrative functions in all plants and sales areas in their respective regions. In addition, three staff mgrs. at H&D headquarters in Sandusky will coordinate manufacturing, marketing and administration for the entire div. They are: Nils F. Janson, mgr. of mfg. services; William E. Richardson, mgr. of admin. services, and William F. Westerhold, mgr. of marketing services.

Elliot K. Ludington, Jr., has been elected exec. v.p. of Chase Bag Co., New York. He is succeeded as v.p. in charge of the company's paper-bag div. by R. H. Ayers. Francis H. Ludington, Jr., has been elected v.p. and treas. W. N. Brock is now v.p. and director of sales. He is succeeded as v.p. and gen. sales mgr. by H. B. Rue. John A. Brewster, mgr. of Chase's Portland, Ore., branch, will also serve as v.p. and director of West Coast operations. The company's Plastics Div. is now under the supervision of E. S. Elgin, v.p.

William B. Banks is new exec. v.p. of The Lord Baltimore Press, Baltimore. He has been with the company 30 years. In other appointments, A. William Chapman becomes v.p., Wilfred L. Cox takes the post of admin. sales mgr. and Thomas W. Englert becomes director

of market research and new products. Gordon Dalsemer has resigned as v.p. of mfg. operations, but will remain as a technical consultant. Lord Baltimore designs and prints packages and labels.

American Aluminum Co. and Cochran Foil Corp., wholly owned subs. of The Anaconda Co., have been merged into a single organization, Anaconda Aluminum Co., with headquarters at Louisville, Ky. Archie P. Cochran, pres. and founder of Cochran Foil, has been elected pres. of the new firm. Exec. v.p.'s of Anaconda Aluminum are: Thomas D. Gebhart and Mord Lewis; v.p.'s are: Edward S. McGlone, Carl Huflage and Chester H. Steele.

Upressit Metal Cap Corp., Danbury, Conn., has been acquired by American Flange & Mfg. Co., New York. American Flange manufactures the Tri-Sure line of closures.

St. Regis Paper Co., New York, has appointed Bernard W. Recknagel gen.



Recknagel

mgr. of its newly formed Flexible Packaging Products Sales Div. Mr. Recknagel, who is asst. v.p. of the company, has been with St. Regis since 1935. His new duties will include developing and organizing the marketing and sales possibilities of flexible packaging product lines other than those covered by the Multiwall Packaging Sales Div., the operations of which are included in the new set-up.

A Customer Technical Services dept. has been created by the Glass & Closure Div. of Armstrong Cork Co., Lancaster, Pa. Mgr. of the new dept. is E. C. Emanuel. Mr. Emanuel is succeeded as gen. mgr. of glass and closure products research by Dr. John M. Sharf. Dr. Sharf is the author of "Armor Coating of Glass," a technical article which appeared on p. 113 of the Feb., 1959 issue of MODERN PACKAGING.

Howard K. Lambert has been appointed gen. sales mgr. of the Machine Div. of Hobbs Mfg. Co., Worcester, Mass. He was formerly in charge of Hobbs' Cleveland sales office, a position now held by Larry Damour.

E. W. Carey has been appointed v.p. of marketing at Fibreboard Paper Products Corp., San Francisco. He assumes the responsibilities of B. P. Altick, now on leave of absence.

Plastic Tube & Bottle, Inc., a newly formed company (see MODERN PACKAGING, Feb., 1959, p. 140), has leased a plant in Nashua, N.H. Henry E. (Hank)

Griffith, pres. of the company, reports that production has begun on plastic squeeze tubes and bottles being manufactured under new and different processes based on patents developed in France and Switzerland.



Alexander

James O. Alexander has been appointed to the newly created post of market mgr. of packaging machinery by Reynolds Metals Co., Richmond, Va. The company has emphasized that it is not in competition with machinery manufacturers and that its "Reycon" machine line has been developed as part of its customer service to facilitate handling of Reynolds' own aluminum-foil containers and other packaging supplies.

Mark K. Dresden, Providence Rd., Media, Pa., is now offering a consultation service covering the fields of packaging and general business, which will include development and improvement of packages.

Subject to ratification by the companies' respective boards and stockholders, The New Haven Board & Carton Co., New Haven, Conn., and William W. Fitzhugh, Inc., Brooklyn, have agreed on general terms for a merger. The Brooklyn firm makes folding cartons and corrugated containers as well as maintaining an envelope and paper specialty div., a gravure printing div., and a color printing and label div. New Haven Board & Carton operates paper-board mills and folding-carton plants.

Jerome L. Scanlon is now sales mgr. of Consolidated Packaging Machinery Corp., Buffalo. Alide J. Champagne has been appointed his assistant.

Duncan S. Brown and William R. Csellak have been appointed v.p.'s of The



Brown Csellak

Gardner Div. of Diamond Gardner Corp., New York. Mr. Brown is now in charge of paperboard manufacturing at the div.'s three mills in Middletown and Lockland, O. Mr. Csellak will supervise output of cartons and retail boxes at Gardner's fabricating plants at the same locations.

Olin Mathieson Chemical Corp., New York, has announced several new staff appointments. M. L. Herzog is now in the office of the v.p. for production and engineering. He was formerly in charge

*Printing sells
what the shipper ships*



Clean, sharp printing makes traveling billboards of H & D corrugated boxes. Brand names get attention, merchandise moves faster. Is your shipping box making a colorful impression? Better see H & D.



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three feet of the sale. Sad case!*

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Symposium Luncheon: Tuesday, Mar. 24, nationally known speaker. I enclose check for _____ tickets at \$7.50 ea.

Name _____ Title _____

Company _____

Street _____

City _____ Zone _____ State _____

Plants & People (cont'd)

of film activities in the Packaging Div. P. C. Brownell has been named v.p. and mgr. for Ecusta paper and film. A. J. Loeb has been promoted to Packaging Div. v.p. for Ecusta paper. E. L. Lynn, as div. v.p., is now responsible for film. New mktg. mgr. for the Packaging Div. is A. T. Safford.

Dr. Sidney Siggia has joined Olin as mgr. of central analytical services at New Haven, Conn.

E. E. Ellies has been elected exec. v.p. of Tee-Pak, Inc., food-casing manufacturer, Chicago. He had been v.p. of mktg. for the past six years.

Shore Line Industries, Inc., Clinton, Conn., has appointed John C. Wagner, Jr., as exec. v.p. and gen. mgr. George Anderheggen is now company sales mgr. Shore Line Industries extrudes, prints and converts polyethylene film for food and industrial packaging.

Ralph M. Knight has been named mgr. of polyolefin planning and applications for U. S. Industrial Chemicals Co., div. of National Distillers & Chemical Corp., New York. Now responsible for long-range planning and coordination of U.S.I.'s polymer development program, he will also direct the company's polymer service laboratories at Tuscola, Ill.



Knight

Before joining the company in 1953, Mr. Knight had been associated with both Du Pont and Standard Oil.

The formation of two new groups to expedite the flow of information about Tenite plastics to the industry has been announced by Eastman Chemical Products, Inc., New York. The two groups—plastics sales development, headed by William P. Gideon, III, and a technical information section, with Roy O. Hill, Jr., in charge—will be located at the Kingsport, Tenn., headquarters of the Eastman Kodak Co. subsidiary.

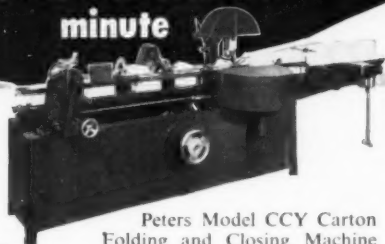
John Prawdzik has been promoted to sales mgr. of Chicago operations for Sherman Paper Products Corp., Newton Upper Falls, Mass. Robert S. Wade has taken over Mr. Prawdzik's former position as Michigan district mgr. He is succeeded as advtg. and sales-prom. mgr. by Charles A. McElroy.

E. K. Hunt has been named to the newly created post of merchandising mgr. of the Plastics & Resins Div. of American Cyanamid Co., New York. He is succeeded as sales mgr. of the div. by H. C. Milton.

Plans to increase manufacturing capacity for polyester film by 30% have been announced by E. I. du Pont de Nemours & Co., Wilmington, Del. Construction to expand the company's Circleville, O., plant will start soon, with the new facilities expected to be ready for operation early next year. It represents the

Peters

Model CCY Carton Folding & Closing Machine
automatically closes
up to 150 cartons per
minute



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Trays	NUTS	
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	TEA	

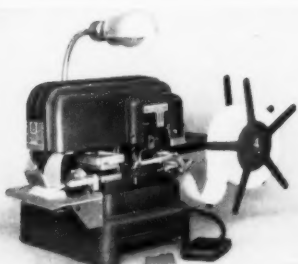
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Marks LARGER Labels for BIGGER Identification!

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 are the label sizes marked by MODEL 10 TL . . . all bigger than ever before! The entire label area can be marked. More room for striking pre-printed identification . . . more room for marking information, in bolder type.

Marks AND Attaches to ANY Package Surface!

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 are among the materials for which Soabar has developed Thermaply label stocks! Feed any flat film package or box-end into MODEL 10 TL. Labels are automatically marked and attached in $\frac{1}{2}$ second!

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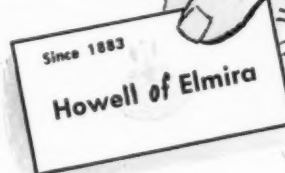
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Plants & People (cont'd)

second major expansion since commercial production of the company's "My-lar" brand of polyester film began in Circleville in 1954.

Max M. Kipfer, gen. mgr. of the closure div. of Aluminum Co. of America, Pittsburgh, has retired after 34 years' service. He was responsible for the development and improvement of many machines used for the manufacture and application of aluminum caps and seals, the company says.

Captain C. M. Tooke has been elected exec. v.p. of Sealright-Oswego Falls



Tooke

Clark

Corp., Fulton, N. Y. W. S. Clark has been appointed to the newly created post of director of planning. Captain Tooke, who has been with Sealright-Oswego since 1956, will coordinate functions of the company's divisions.

Appleton Machine Co., Appleton, Wis., has announced the promotion of three executives. Tany Agronin succeeds Victor W. Bloomer as pres. Mr. Bloomer, who has been with the company since 1920, is now chairman of the board. John M. MacDonald, Jr., mgr. of market development, is now vice president.

William A. Angus has joined Rubber & Asbestos Corp., Bloomfield, N. J., as v.p. of sales, a newly established post. He was formerly Eastern regional sales mgr. for Minnesota Mining & Mfg. Co.

Eugene L. Brintley, Sr., has retired as coordinator of operational process and methods for the Container Div. of Jones & Laughlin Steel Corp., Atlanta.

Olin Mathieson Chemical Corp., New York, has opened a new research center in West Monroe, La., to accommodate the company's accelerated program of research and product development of its forest-products operations. The new facility, known as the Frostkraft Research Center, is part of OM's Packaging Div. Dr. David C. Lea is in charge of the operation.

Markem Machine Co., Keene, N.H., has set up three new divisions to facilitate the sales and service of its packaging-line equipment. They are: Chemical Div., managed by John G. Powers; Food Div., managed by Arthur F. McNaughton, and Mechanical Industries Div., managed by Spencer M. Wright.

Interchemical Corp., New York, has appointed Francis A. E. Spitzer as pres. of its International Div. He succeeds Joseph G. Morris, retired. Mr. Spitzer has been associated with Interchemical since 1939.

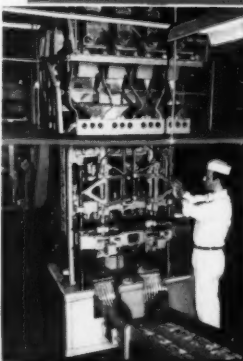
Harold M. Annis has been elected v.p. of research and development for Oxford



THE MENTHOLUM CO. uses an Automatic Accumulator and Bundler. Saves space, hand filling and labor cost.

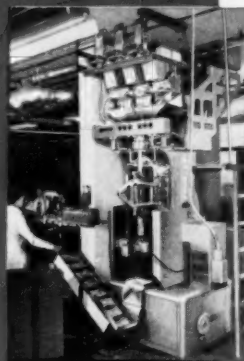


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BRACHS CANDY CO. finds COMPAK the ultimate in economical, high volume flexible packaging production. Completely automatic.

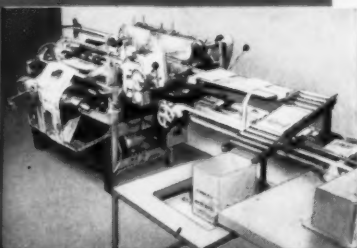
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The Round Ball
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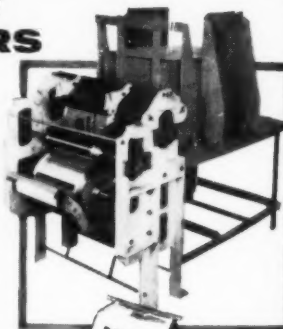
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Plants & People (cont'd)

Paper Co., New York. In his 22 years with Oxford, Mr. Annis has served successively as tech. director, mgr. of sales service, mgr. of product development and asst. to manufacturing v.p. He is also a member of the Executive Committee of the Technical Assn. of the Pulp & Paper Industry.

Printing Material Corp. is a new company with offices at 350 Hudson St., New York 14. Set up by Martin A. Ross (former v.p. of Consolidated International Equipment & Supply Co.), the company is exclusive agent for packaging machinery, presses and paper cutters made by various German, French and Swedish manufacturers.

Philip B. Stull has resigned as v.p. and director of Hercules Powder Co., Wilmington, Del. He has also relinquished his position on the exec. committee. Mr. Stull, who is retiring from the company after 35 years, will remain for a time as special asst. to the president.



Measday

James P. Measday has been appointed gen. sales mgr. and advtg. mgr. of Ivers-Lee Co., Newark, N. J. He joined the unit-packaging company in 1948 and was made gen. sales mgr. in 1957. He will now supervise advertising, merchandising, public relations and marketing.

Robert P. Jones becomes exec. v.p. and gen. mgr. of Sutherland Paper Co.'s sub., Fort Orange Paper Co., located at Castleton-on-Hudson, N. Y. He succeeds Gaylord Beason, who died last December. Mr. Beason had been with Sutherland since 1933. Mr. Jones was formerly v.p. in charge of sales at Fort Orange.

Harley Earl, Inc., industrial design firm of Warren, Mich., has been reorganized under the title of Harley Earl Associates. Promoted to the position of design associate are: David Bishop, Craig Paul, Samuel Highberger, Paul Petlewski, Dominic Saporito and James Balmer.

G. S. Mustin has resigned as mgr. of the Los Angeles Div. of Container Laboratories, Inc., of New York, to assume the position of packaging research coordinator with Douglas Aircraft Co., Santa Monica, Calif.

Group Developments, Ltd., a sub. of Courtaulds, Ltd., London, England, has acquired two British packaging companies. They are Reads, Ltd., manufacturer of steel drums, tin plate cans and boxes, and Pearlite Box Co., Ltd., producer of containers, including waxed cartons and boxes.

Donald K. Ballman, director of sales, and C. B. Branch, mgr. of the plastics dept., have been elected to the board of The Dow Chemical Co., Midland, Mich. They succeed Dr. E. O. Barstow and R. L. Curtis, who are retiring from

wrap-ade HIGH SPEED UNIT PACKAGER

Shown is only one of many Wrap-Ade Unit Packagers. Other models available for packaging:

- LIQUIDS
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- TABLETS
- SOFT GOODS
- FOOD PRODUCTS
- HARDWARE

or any reasonably flat small product

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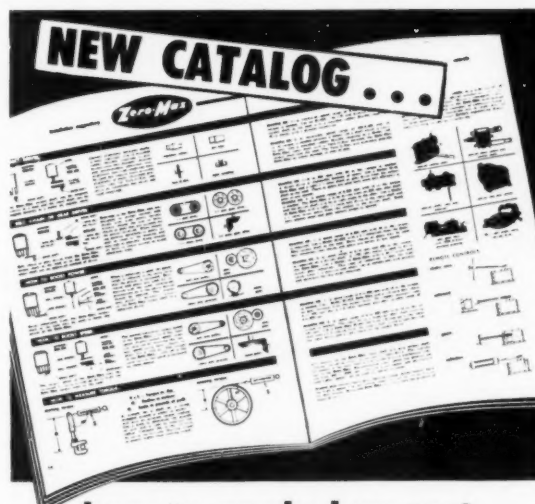


This Wrap-Ade Unit Packager speeds production and cuts costs in packaging a complete luncheon service in one attractive sanitary Cellophane package. (Includes plastic knife, fork, spoon and sugar, salt & pepper servings.)

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how to apply low cost VARIABLE SPEED to your product

This 16-page catalog covers a wide range of practical information on how to get the most from your electric motors . . . variable speed, instant control, reversing, increasing torque, clutching, presetting RPM's, remote control, measuring torque . . . and other items. It also illustrates and describes Zero-Max variable speed controls for fractional horsepower motors.

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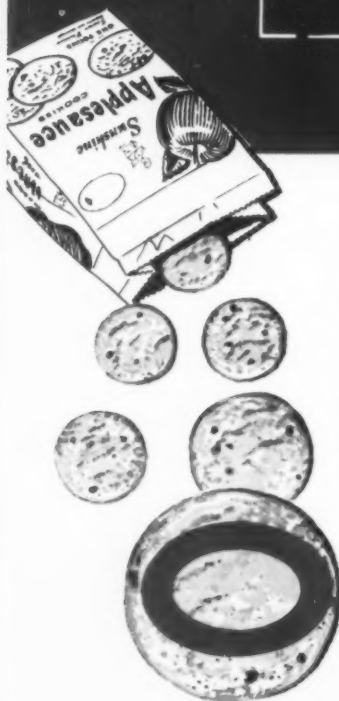


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Put together the right combination of color, design and product identification, and you've got a package with "built-in" buy appeal, guaranteed to stop any shopper's roving eye. The real trick, of course, is in knowing how to combine these elements. It calls for experience . . . the kind of experience that Oneida has built up in more than 30 years of producing and developing effective, hard-sell-

ing flexible packaging for some of the best known and fastest-moving products in the country!

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Plants & People (cont'd)

board membership. Dr. Barstow also has retired as v.p., but was named honorary board chairman. Mr. Curtis has retired as gen. mgr. of the Western div., but retains his vice presidency. **Leland A. Doan** succeeds him as gen. manager.

Sy E. Einhorn has been promoted to sales mgr. of the display div. of **Gibraltar Corrugated Paper Co.**, Jersey City. Since joining Gibraltar in 1952, Mr. Einhorn has been senior salesman in the display div. His new appointment, according to the company, is part of a program to assist customers' marketing and sales-promotion departments to develop point-of-purchase displays.

R. A. Hoekelman has been appointed to the newly created post of director of customer relations at **American Cyanamid Co.**, New York. His former position



Hoekelman Francisco Holland

as gen. mgr. of the company's plastics and resins div. has been taken over by **L. J. Francisco**. Mr. Francisco is succeeded as asst. gen. mgr. in the div. by **W. D. Holland**. Mr. Holland was formerly asst. gen. mgr. of the company's commercial development division.

Ralph K. Day, who has been associated with the glass industry for many years, has inaugurated a consulting service in the fields of research, high-temperature processes and quality measurement and control. His offices are at 307 W. Harrison Ave., Maumee, O.

Continental Can Co., New York, has begun construction of a 350-ton-per-day bleached-sulphate paperboard and paper mill on the Savannah River near Augusta, Ga. According to the company, its investment in a bleached foodboard mill is based on the expectation that the material will continue to be the "fastest growing segment of the paperboard industry." A 216-in. Fourdrinier machine is to be installed and the facility will employ more than 400 persons. The mill is expected to be in operation early in 1961. Concan's various container divisions will use the greater part of the mill's output—the remainder will be offered for outside sale.

John H. Vogel has joined **Oxford Paper Co.**, New York, as mktg. research manager. Mr. Vogel was formerly with the **American Paper & Pulp Assn.**

C. H. Dexter & Sons, Inc., Windsor Locks, Conn., has assumed ownership of **Standard Insulation Co.** of East Rutherford, N. J. The newly acquired firm, which specializes in the coating, lamination and impregnation of paper, fabric

and foil, is also a producer of bottle-cap liner material. It will be operated as a wholly owned subsidiary under the name of **Standard Insulation Co., Inc.** **Lewis C. Kleinhaus** will continue as Standard's pres. and gen. mgr. No changes in production or sales policies are contemplated.

Harold G. Kilb has joined the recently established Chemical Div. of **Bostrom Corp.** of Milwaukee to handle promotion and sales of the company's molded polyurethane foam products. (See **MODERN PACKAGING**, Jan., 1959, p. 126.) Mr. Kilb will concern himself, initially, with the introduction of Bostrom's "Perma-thane" polyurethane foam.

Milprint Overseas Corp., S. A., a sub. of **Milprint, Inc.**, Milwaukee, has opened its first European branch office, in Zurich, Switzerland. **Sherman P. Congdon** has been appointed resident mgr. there. Mr. Congdon has been in the graphic arts and packaging fields for nearly 30 years, and has spent much of that time setting up new packaging operations in Central and South America.

Al B. Sheen, a former Coca-Cola Export Corp. executive, has been named export sales mgr. of **Crown Cork & Seal Co.**, Philadelphia. He will headquarter in the company's New York office. **Everett B. Webster** is now secy.-treas. of the company. He has been with Crown for 38 years.

V. C. Ambler Co., Paris, Tex., and **Bryce Packaging, Inc.**, Memphis, have merged. The Texas company has become a sub. of Bryce. **V. C. Ambler** continues as pres. as well as a director of the parent organization.



Niemiec

Leonard R. Niemiec has been promoted to v.p. in charge of sales by **Field Paper Box Co.**, Chicago. He has been with the company for more than ten years, during the last three of which he served as sales mgr. Field Paper Box makes a line of set-up and folding boxes.

Francis Blod Design Associates, Inc., is the new name of the New York industrial and package design firm formerly named **Design Associates, Ltd.**

Adhesive Tape Corp., a new concern, has begun operations at 58 Seabring St., Brooklyn, for the production of pressure-sensitive adhesive tapes.

Armstrong Cork Co., Lancaster, Pa., is expanding its Dunkirk, Ind., glass plant. The expansion is expected to increase output by approximately 50%.

Leonard H. Lipman and **Millard G. Brekke** have formed a consulting company to be known as **Corrugating, Adhesive & Combiner Consultants, Inc.**, with headquarters at 21 Goodale Circle, New Brunswick, N. J.

T. Richard Probst has joined **Deerfield Glassine Co.**, Monroe Bridge, Mass., as



Onecida takes a direct approach to your packaging **PROBLEM** . . . puts a staff of trained experts to work on the **SOLUTION** . . . and guarantees profitable **RESULTS**. Here's how it's done:

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- **SERVICE, of course** — Onecida offers the fast, dependable service that results from experience, skill, research, and development. Add up the advantages listed above . . . you'll see what we mean.



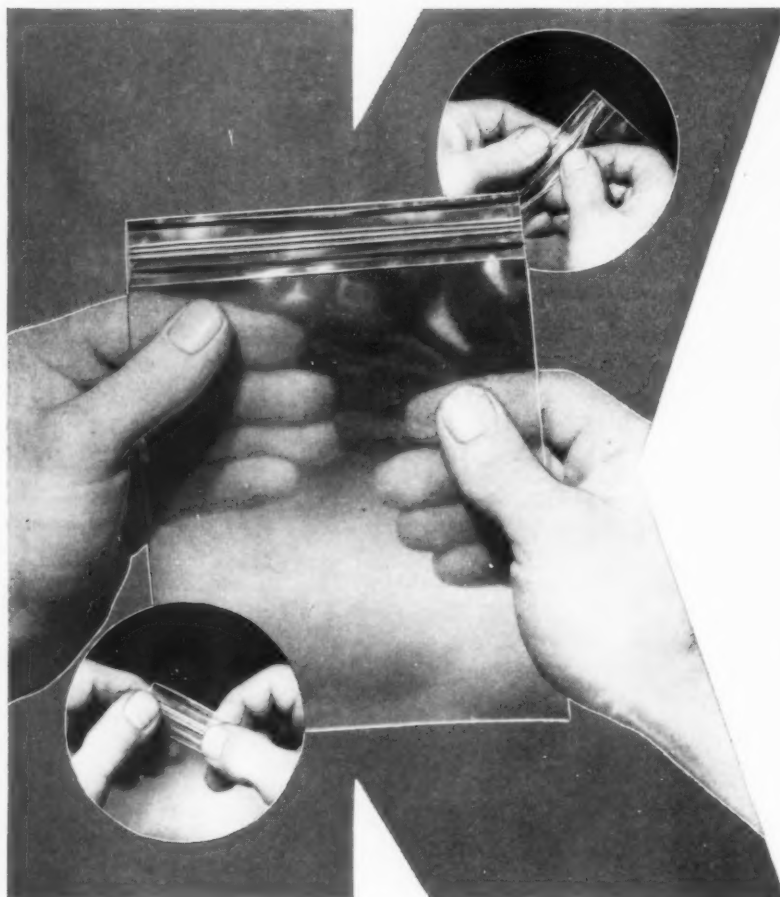
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from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment,
Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

and sell
PROTECT YOUR PRODUCTS, PARTS, PRINTS
 in the amazing **ZIPLIP**
polyethylene bags



Moisture-proof and dust-proof, these unique "see-thru" bags are selling a wide variety of consumer and industrial products every day. Plain or printed, they say "Buy Me" wherever seen. Reseal Reopen Repeatedly, they are ideal for consumer and industrial products that must be seen to sell. Let a Kennedy Sales Engineer show you how Zip-Lip can help you, too.

*Patent No. 2,666,466 and related patents.



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KENNEDY CAR LINER AND BAG CO., INC.
 3000 Prospect Ave., Dept. C, Shelbyville, Indiana

Offices in most principal cities. See the yellow pages in your phone book.

Plants & People (cont'd)

exec. v.p. Most recently, Mr. Probst was v.p. of operations of Brown Co., Berlin, N. H. He has also been associated with the former Eastern Corp., Oxford Paper Co. and the Gilbert Paper Co.

Continental Can Co., New York, has begun construction of two new can plants at Pascagoula, Miss., and at Weslaco, Tex. Concan's affiliate, Continental Can Co. of Canada, Ltd., is building a metal can plant at Chatham, Ont.

Hoerner Boxes, Inc., Keokuk, Iowa, this year will build sheet plants at Tupelo, Miss., and at Springfield, Mo.

Rhineland Paper Co., Rhineland, Wis., has been merged into St. Regis Paper Co. as a separate div. of the parent company.

Production of liquid vinyl chloride and natural and synthetic latex compounds has begun at the new Clifton, N.J., plant of Morningstar-Paisley, Inc., New York.

A new service center for glass technology and research has just been completed for Brockway Glass Co., Brockway, Pa. Dr. J. P. Poole will direct operations.

Fuller Adhesives International, a new affiliate company, was recently organized by H. B. Fuller Co., St. Paul, Minn., with Sterling Ward as v.p. and gen. manager.

National Starch Products, Inc., New York, plans a 50% expansion of its vinyl-acetate polymerization plant in Meredosia, Ill.

A license agreement has been signed by Canada Paper Co. and Clupak, Inc., New York, to permit the Canadian company to make stretchable paper and to use the "Clupak" trademark.

Pace, Inc., contract and aerosol packager, has moved to new quarters at Bldg. 1114, MacArthur Rd., New Castle County Airport, Wilmington, Del.

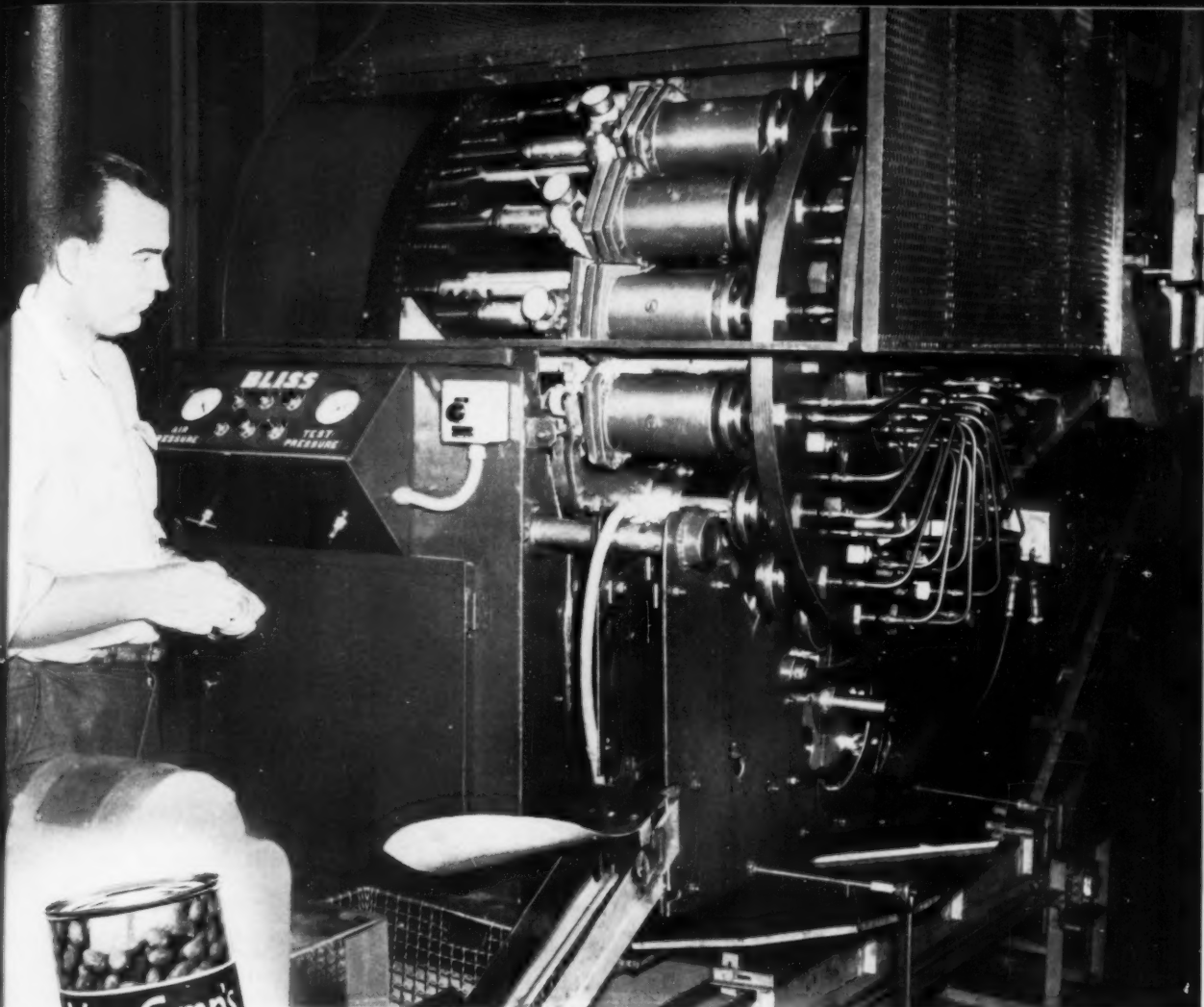
Distinctive Packaging Corp. has moved to 622 Broadway, New York.

A new sales territory with headquarters in Greensboro, N. C., has been established by the plastics div. of Eastman Chemical Products, Inc., Kingsport, Tenn. Mgr. is John M. Marvin.

Plastic Tube & Bottle Distributors, Inc., Nashua, N. H., has been appointed representative throughout the New England area for Hedwin Corp., Baltimore.

The packaging-engineering firm of Jacobs-Henry-Smith Engineering, Inc., Pittsburgh, has opened its first Philadelphia branch in the Broad-Locust Building.

Niemand Bros., Inc., manufacturer of tubular paper products, has moved to 45-10 94th St., Elmhurst, N. Y. The increased facilities permit the consolida-



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with a touch of **BLISS**

This can tester detects invisible "leaks" ... is typical of the variety of high-efficiency Bliss equipment that Stokely-Van Camp uses to make its own cans.

If *you* make your own cans ... or are thinking of it, check with Bliss. Chances are that a completely Bliss-built and equipped "turn-key" plant can take the headaches out of the job for you. But whether it's a complete plant you need, a battery of machines or a single can tester, see your Bliss representative first.



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Plants & People (cont'd)

tion into a single manufacturing unit of the company's operations with those of its newly acquired sub., Cellu-Fibre Can Corp.

Ned L. Roberts, Inc., plastic-forming and packaging-machinery maker, has moved to Burlingame, Calif.

General Printing Ink Co., div. of Sun Chemical Corp., New York, has launched a re-organization program for its ink-manufacturing plants in the East, the first phase of a nationwide revamping which will include integration with management and operations of Bensing Bros. & Deeney.

Union Bag-Camp Paper Corp., New York, has completed plans for construction of a corrugated-box plant in Spartanburg, S. C.

The Paper Cup Div. of Potlatch Forests, Inc., has removed manufacturing and executive facilities to new quarters at 720 Dowd Ave., Elizabeth, N. J.

Standard Packaging Corp., New York, has acquired Chemical Paper Mfg. Corp., Holyoke, Mass. Under the direction of Chemical's present management, the company will operate as the Chemical Fine Paper & Board Division.

Rights to produce "Bandmaster," a patented method for laminating bread bands to cellophane, have been awarded E. S. & A. Robinson (Canada), Ltd., by Rap-In-Wax Paper Co., Minneapolis.

Warehousing and paper-converting facilities are included in the plant now under construction at Griffin, Ga., by The KVP Co., Kalamazoo, Mich. The new plant, KVP's eighth, will be in production this spring.

The Western Paper Box Div. of Stone Container Corp. has moved to new production quarters at 6400 Harper Ave. in Detroit. The div. makes folding cartons, set-up boxes and shipping containers.

Promotions

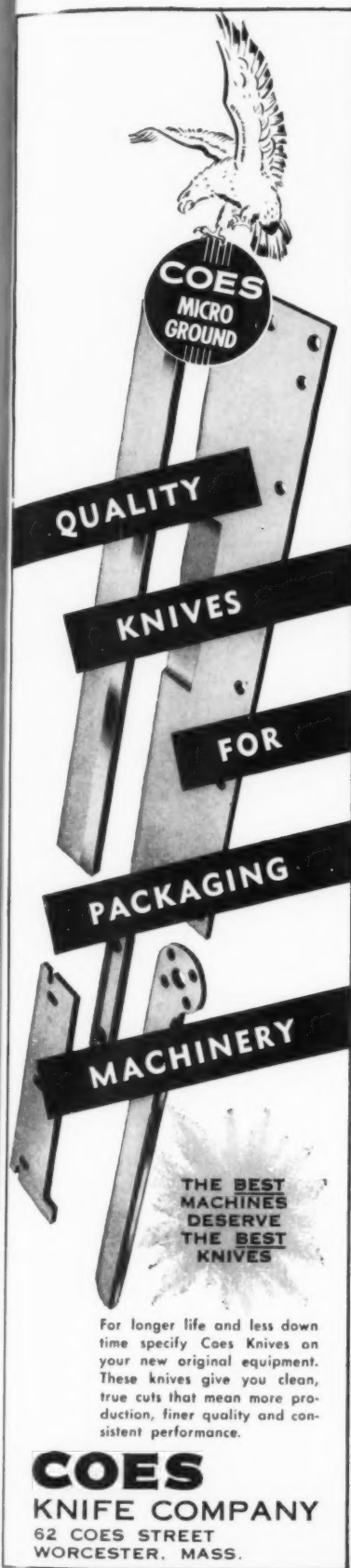
John M. Duncan: to Eastern regional sales mgr., Continental Can Co., New York. Walter D. Morton has been named New York district sales mgr. for the division.

Russell M. Mather: to gen. mgr., Box-board Div., Stone Container Corp., Chicago.

G. Thomas West: to v.p., Eastern Div., General Printing Ink Co., div. Sun Chemical Corp., New York. Roy Hearn becomes gen. sales mgr. at GPT's new Atlanta plant.

Richard W. Miller: to field sales mgr., Ivers-Lee Co., Newark, N. J.

Ralph Griffey: to div. sales mgr., Mich., Ohio, Pa., N. Y. and W. Va., Packers Package, Inc., Muncie, Ind. Bill Thornhill has been named div. sales mgr. for folding cartons and



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THE BEST MACHINES DESERVE THE BEST KNIVES

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paraffin packaging materials in Tex., Ala., La., Miss., Ark. and parts of Fla., with headquarters at Shreveport, La.

Robert F. Callahan: to sales mgr., Multiwall Packaging Div., Kansas City, Mo., St. Regis Paper Co., New York,

Ernest Williams: to Western regional sales mgr., Metal Edge Industries, Barrington, N. J. **Joseph A. Dolan:** to Eastern regional sales mgr., Charles H. Black succeeds Mr. Williams as sales prom. manager.

Ross Harris: to branch mgr., San Diego sales office, Pacific Coast Div., Owens-Illinois Glass Co., Toledo, O.

M. A. Contreras: to Eastern regional mgr., New York, Avery Adhesive Label Co., Monrovia, Calif. **Martin Bender** is now Chicago district mgr.

Paul E. Sigler: to v.p., Container Corp. of America, Chicago.

Frank C. Williams: to director, Continental Paper Co., Ridgefield Park, N. J. Mr. Williams is a v.p. of the company and has been gen. sales mgr. of the Alford Cartons Div. since 1949.

Tom Leo: to mgr., bakery sales, Ekeo-Alcoa Containers Inc., Wheeling, Ill.

Fred A. Weymouth: to v.p., Interchemical Corp., New York. **James E. Renson:** to director of market research.

Dr. E. S. Flinn: to asst. to the pres., Hurlbut Paper Co., South Lee, Mass., sub. of Mead Corp., Dayton, O.

Leo Gans: to asst. gen. mgr., Anchor Plastics Co., Long Island City, N. Y.

Paul Kaplan: to technical director, Stein Hall & Co., New York.

Appointments

Walter G. Koch: from chairman, International Steel Co., to v.p., Inland Container Corp., Indianapolis.

A. T. DeVera, Jr.: from American Plastic Corp. to district sales mgr., Fluid Chemical Co., Newark, N. J. The company does contract filling of aerosol and liquid products.

John R. Uebler: from advtg. mgr., Bartelt Engineering, to sales engineer, Diederichs & Griffin Co., packaging-machinery mfrs. rep., Chicago.

Loring Pickering, Jr.: from James Lees & Sons Co. to marketing director, Borne Chemical Co., maker of oils and solvents for plastic containers, Elizabeth, N. J.

Obituaries

Edward F. Geckle, pres. of The Central Carton Co., Cincinnati, died Jan. 5. He was 51. Mr. Geckle had been with Central Carton for 28 years.

Paul R. Morrow, mgr. of the Foods Div. of Brockway Glass Co., Brockway, Pa., died Dec. 1. He had been with the company since 1944.

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**MASS
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The photos show the dual-use versatility of PA's sales-exciting packaging. In two cases, WEAREVER® applied the same product-fitting dome, (mass-produced from the same die) to two different packages. These double-duty performances help to reduce costs and simplify inventory.

Use Plastic Artisans' experienced packaging knowledge to help improve your sales. Send for PA's guide to formed plastic "Display Packaging" or ask to have a representative call.

David Kahn, Inc. uses the same Plastic Artisans' DOMEPAK to serve two different WEAREVER® put-ups.

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Custom-designed, mass produced packages, package components, sampling devices, etc. in clear, opaque and colored plastics.



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Other new Ludlow Plastics include:

PROPLENE* A clear, strong, high-gloss packaging film made from polypropylene resin. Performs well in a variety of packaging machines. Good printability. Exceptional shelf life and oil resistance.

CAPLENE* A strong, exceptionally clear packaging film made from nylon-6. Tensile strength ranges from 13,800 to 17,000 lbs. per square inch. Excellent resistance to greases, oils and odors.

METAFOAM* A flexible, textured sheeting made from foamed polyolefin, of particular interest to the food packaging field. Tests show excellent thermoformability, insulation values, heat sealability and abrasion resistance.





Sell Them . . . with Ludlow METAPLENE*

Here are two unretouched photos of an assortment of soft goods. The plastic films that cover these products are both medium density polyethylenes . . . But the one on the right is *clearly* superior. It's Ludlow's METAPLENE — one of several new and unusual packaging films produced by Ludlow's new cast film process.

METAPLENE — with *up to twice** the gloss* of any blown film — can give your products a new freshness and lustre that turns shoppers into buyers. It has excellent machineability, good printability and greater shelf life than cellophane.

Send today for samples and technical data on METAPLENE and other new Ludlow plastic films and foams.

*Trademark applied for by Ludlow Papers, Inc.

**METAPLENE has been rated at 92 photovolts in accordance with TAPPI — T480M-51 as compared with a range of 40-55 photovolts for blown films.



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Ludlow Plastics is a division of LUDLOW PAPERS, INC., manufacturers of fine papers, gummed label papers, gummed tapes, building papers and packaging papers. Ludlow Papers, Inc., is a subsidiary of Ludlow Manufacturing & Sales Company, manufacturers of jute and jute products.

For Your Information

National Flexible Packaging Assn. held its 8th annual meeting Jan. 20-22 at the Waldorf-Astoria Hotel in New York. The first-day sessions were concerned with machine wrapping with polyethylene film, the development of standards and specifications on converted cellophane and reports of surveys and plans. The second day, known as "Associates Day," was devoted to reports by representatives of suppliers and machinery manufacturers on new developments. The third-day activities included sessions on military packaging, foil and laminated products, and glassine bags, as well as presentation of the new NFPA Technical Manual.

Robert E. Borden has been named director of information for the Folding Paper Box Assn. of America. He will be in charge of a broad public relations and promotional program formerly conducted with the aid of outside counsel. New director of member relations for FPBAA is Perry L. Smithers. Mr. Smithers joined the association in 1957 as director of public relations. In another FPBAA appointment, William L. LaGrave becomes director of the Bakery Package Group.



Borden

The proposed merger of Label Mfrs. National Assn. and Lithographers & Printers National Assn. has been approved by both groups. According to executives of the organizations, the merger is expected to avoid duplication and best serve and advance their common interests.

A. W. Dufrechou of Kohlmann Box Co., New Orleans, has been elected a director of the Fibre Box Assn.

Karl O. Elderkin, pres. of Bowaters Research & Development, Inc., has been named the 27th TAPPI Medallist by the Technical Assn. of the Pulp & Paper Industry. The TAPPI medal is awarded to an individual for outstanding contributions toward the technical advancement of the pulp and paper industry. Cited among Mr. Elderkin's accomplishments were development of the vacuum transfer for lightweight kraft and newsprint machines for high-speed operation and his pioneering work in designing the first high-speed (2,000 ft. per minute), lightweight kraft-paper machine at Crossett Paper Mills.

A 234-page technical book, "Kaiser Aluminum Foil," has just been published by Kaiser Aluminum & Chemical Sales, Inc. Designed as a complete and comprehensive treatment of the subject, the book is divided into four main areas:

"A Panorama of Aluminum Foil Products or End Uses" (chapter 1); "Design" (chapter 2); "Production, Properties and Availability of Aluminum Foil" (chapters 3 and 4), and "The Basic Aluminum Foil Converting Processes" (chapters 5 through 10).

Included are more than 350 photographs and drawings, an index, a glossary and a table of contents. The 8½-by-11 in., hard-cover book is bound in five-color-lithographed aluminum foil. Copies are available without cost if requested on your company letterhead; otherwise a charge of \$12.50 is made for each personal copy. Write to the company at 919 N. Michigan Ave., Chicago 11.

New exec. director of the Lithographic Technical Foundation is William H. Webber. He succeeds Wade E. Griswold, deceased. Mr. Webber has had many years' experience in the printing and graphic-arts fields, and has been a consultant specializing in marketing new printing products and processes.

A technical manual titled "The Glued Manufacturer's Joint in the Corrugated Container Industry" is offered without charge by Williamson Adhesives. The 24-page manual contains data on adhesive technology, discusses the technique for adhesive application and contains results of tests conducted to show the relative efficiency of the methods used to bond corrugated containers. For copies, write Department KE, Williamson Adhesives, Inc., 8220 N. Kimball Ave., Skokie, Ill.

The United Glass Information Bureau—an organization designed to assist and service the packaging needs of U.S. manufacturers who plan to establish plants in Great Britain—has been established in New York by United Glass Bottle Mfrs., London. A new brochure on packaging in glass in Great Britain is available on request to UGBM's ad agency, L. H. Hartman Co., 50 Rockefeller Plaza, New York 20.

"Small Drops of Ink" is the title of a 16-page booklet offered without charge by General Printing Ink Co., Div. Sun Chemical Corp. The booklet discusses the raw materials used to make printing inks, their characteristics and the ways in which ink makers compound them to customer specifications. Write GPI at 750 Third Ave., New York 17.

A round-table discussion of the packaging and merchandising of frozen foods was sponsored by the Packaging Institute Feb. 10 at New York's Statler Hotel. Included on the discussion panel were: Ralph J. Becker, Milprint, Inc.; Warren J. Bunting, St. Regis Paper Co.; Robert A. Farrell, Marathon;

Orville Johnson, Western-Waxide; Charles D. MacCormack, Jr., John H. Dulany & Son; E. L. Morin, Seabrook Farms; Edward G. Penn, Riegel Paper Corp.; John M. Ramsbottom, Swift & Co., and L. J. Wood, Jr., National Starch Products.

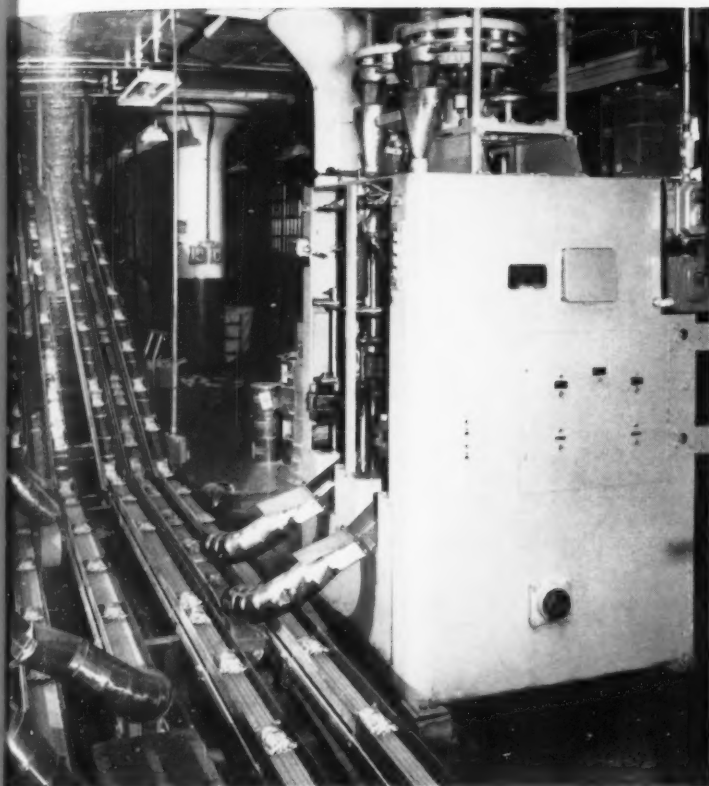
Two brochures containing detailed information about "Petrothene" polyethylene are being offered without charge by U.S. Industrial Chemicals Co. "Petrothene Polyethylene Resins" is a 12-page booklet, with many charts, of technical data. "Petrothene Polyethylene . . . a Processing Guide" has 96 pages and is profusely illustrated with charts, diagrams and photos. Divided into six sections, it supplies complete information on polyethylene properties and processing techniques. For copies, contact U.S. Industrial Chemicals Co., Div. National Distillers & Chemical Corp., 99 Park Ave., New York 16.

Continental Can Co. has presented a \$500,000 equipment-manufacturing plant in Syracuse, N.Y., to Syracuse University, which will use it to house research activities of various types.

The International Show and Congress of Printing, Publishing and Paper Industries will be held Oct. 3-11 at the Milan Fairgrounds in Milan, Italy. Otherwise known as "GEC 1959," the show is a continuation of the European graphic-arts exhibitions which have been held in London (IPEX), Paris (TP) and Düsseldorf (DRUPA). Exhibits at the show will include new machinery and outstanding examples of new packages. For further information, contact

Events

- March 4-6—Gravure Technical Assn., 10th annual convention, Drake Hotel, Chicago.
- March 10-11—Packaging Assn. of Canada, Canadian National Conference, King Edward Hotel, Toronto.
- March 22-26—Folding Paper Box Assn. of America, annual meeting, Drake Hotel, Chicago.
- March 24-26—Point-of-Purchase Advertising Institute, exhibit, Palmer House, Chicago.
- April 10-12—National Assn. of Glass Container Distributors, annual meeting, The Queen Elizabeth Hotel, Montreal, Canada.
- April 13-16—Lithographers National Assn., 54th annual convention, The Greenbrier, White Sulphur Springs, W. Va.
- April 13-17—American Management Assn., Packaging Show, Amphitheatre, Chicago.



Why General Mills chose Robo-Wrap for Pick-A-Pack

This new Robo-Wrap at General Mills' Chicago plant will soon be joined by 2 more machines—because it has been proved that Robo-Wrap increases the efficiency and economy of their packaging operation.

The Robo-Wrap forms, fills and seals pillow packages. Under production line conditions at General Mills, the Robo-Wrap cruises at 100 bags a minute and can run at 120 . . . it provides a better seal and fewer rejects even at these high speeds because its unique hand-over-hand action holds jaws in sealing position for a longer time . . . it minimized work stoppages due to torn paper roll stock because the combination mechanical and hydraulic jaws exert a strong, jerk-free pull . . . it is easily adaptable to handle a variety of other products.

Robo-Wrap packages in cellophane, paper, poly, plastic or laminates. See how it can answer your needs for speed, dependability, easy maintenance and adaptability.



Write for Illustrated Robo-Wrap Folder
that demonstrates features and advantages important to you.

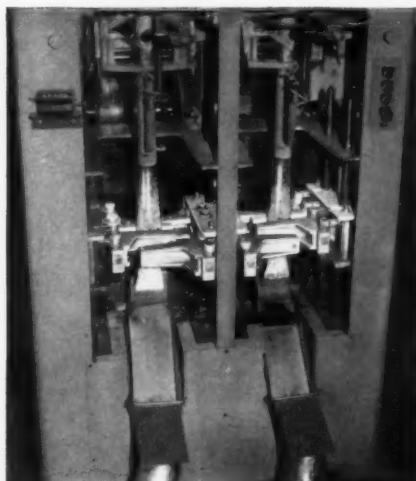
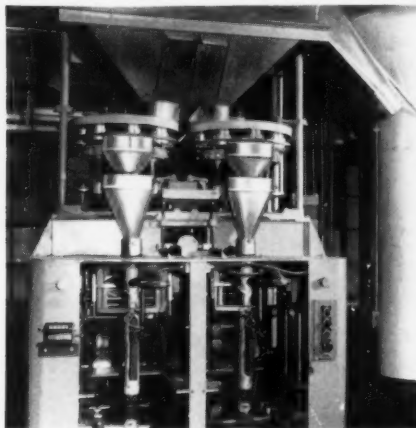


Photo shows hand-over-hand sealing action. Lower jaws, now disengaged, start to go up and pass on the outside of still-engaged pair of jaws.



Robo-Wrap versatility permits many different feeding arrangements. At General Mills, there is a volumetric feeder leading from storage hopper supplied from floor above.



General Mills Pick-A-Pack Package offers five tasty breakfast foods—Wheaties, Cheerios, Kix, Trix, and Sugar Jets—in one attractive carton.

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CORPORATION
Anderson, Indiana

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The TRANSPARENT PLASTIC "PRESENTATION" CARTON

Styled to "Show Off" **vogue**

"Fashion's Smartest Cigarette"
made by Stephano Bros., Philadelphia



DB

Another Distinctive Container
Produced By

DILLON-BECK SPECIALISTS in PLASTIC PACKAGING and CUSTOM MOLDING

COMPLETE FACILITIES

for creating, designing,
and producing
"something special"
in packaging

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- ★ MOLD & DIE CONSTRUCTION
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F.Y.I. (continued)

Dr. Ing. Riccardo Denon, General Secretary, GEC 1959, 26 Via Borgonuovo, Milan, Italy.

Alan Spiegel of Clearprint, Inc., is new pres. of Metropolitan Assn. of Film Converters, succeeding Samuel J. Rivman of Wrapture, Inc., who becomes a member of the executive committee. Other new officers are: v.p.—Fred Abrams, Vizofilm Mfg. Corp.; treas.—S. Mulford Cole, Mason Envelope Co., and secy.—Robert Siegel, Flexicraft Industries.

American Management Assn. reports the availability of "Integrated Packaging & Material Handling," an 87-page report based on material presented at the 27th National Packaging Conference. The report presents three company studies describing the control of material movement through the planning and engineering of integrated packaging and materials-handling lines. Price is \$1.25 per copy for AMA members; \$2.25 for non-members. Contact AMA, 1515 Broadway, New York 36.

A Design Exhibition Center, said to be the first of the kind in the Near East, has been opened in Haifa, Israel, by the Israel Institute of Industrial Design. Exhibits include outstanding examples of European and American packaging. One of the purposes of the new center, reports IIDA, is to help Israeli packagers upgrade the functional and design appeal of their packages for increased export sales.

Gregory J. Lanigan of American Flange Mfg. Co. has been named adviser to the Director of the Containers & Packaging Div., Business & Defense Services Administration, U.S. Dept. of Commerce. Mr. Lanigan has had wide experience in the field of metal containers and closures.

L. H. Zahn of Ciba Pharmaceutical Products becomes director of committee activities of the Packaging Institute. He is succeeded as chairman of the Technical Operations Committee by Dr. L. E. Simerl of Olin Mathieson Chemical Corp. Dr. Simerl reports that his committee is exploring the prospects for organizing three new committees—on polyolefin resins, fibre drums and folding cartons. Members with interests in these fields are asked to write to Dr. Simerl at the PI office (342 Madison Ave., New York), expressing their thoughts concerning the need for and the possible areas of work for these proposed committees.

PI reports also that it is sponsoring three regional meetings to discuss recent amendments to the U.S. Food & Drug Act and their effects on the safety of packaging materials. The meetings are being held in New York (March 3), Chicago (during the week of March 22) and Los Angeles (April 6).

The second annual Packaging Training Conference of the Industrial Manage-

ment Center will be held May 31-June 13 at the Lake Placid Club, Essex County, N.Y. It will consist of an integrated series of lecture-discussion sessions on various phases of packaging. For a brochure containing full details, write James R. Bright, Director, Industrial Management Center, 56B Robbins Rd., Lexington, Mass.

A research symposium "to alert the paper industry to the need for more intensive research and a more intelligent administration of such research" was presented jointly Feb. 26 in New York by the Technical Assn. of the Pulp & Paper Industry and the American Paper & Pulp Assn. Featured speakers were Lt. Gen. James M. Gavin of Arthur D. Little, Inc.; A. B. Layton of Crown Zellerbach Corp., and Howard S. Turner of Jones & Laughlin.

TAPPI also held its 44th annual meeting Feb. 23-26 at the Commodore Hotel in New York. The four-day program included 29 technical sessions.

"Silk Screen Techniques," a new book by J. A. Biegeleisen and Max Arthur Cohn, describes in simple terminology the materials and step-by-step procedures used in the five major stencil techniques: block-out, Tusche, paper, film and photographic. The first three chapters in the 188-page book discuss the origin and development of silk screen printing, basic principles and basic equipment. After the five chapters on stencil techniques, the final three chapters are devoted to multicolor printing. The book is profusely illustrated and includes a set of progressive proofs for a four-color print. Copies are available at \$1.45 each. The publisher is Dover Publications, Inc., 920 Broadway, New York 10.

The Packaging Assn. of Canada reports that a record 410 entries were submitted in the 1958 Package Design and Display Competition, held in conjunction with the 7th Canadian National Packaging Exposition at Toronto. A total of 32 awards and 25 honorable mentions was made in three areas of competition. In the Consumer Package category (209 entries), nine awards and 10 honorable mentions were presented. In the Merchandising Display category (119 entries), there were 15 awards and six honorable mentions. And in the Industrial Container category (82 entries), eight packages won awards and nine received honorable mention citations. Detailed information on all winning entries is available from the Packaging Assn. of Canada, 1 St. Clair Ave., W., Toronto 7, Canada.

Milprint Overseas, Inc., a sub. of Milprint, Inc., recently conducted the first in a series of technical seminars for its foreign associate companies. Held in Milan, the seminar on packaging films and foils was attended by 14 technical men representing Milprint associates in Belgium, Denmark, France, Germany, Italy, Norway, Scotland, Sweden and Switzerland. It was conducted by Dom Perino, mgr. of product development for Milprint, Inc.

How bundling with **AVISCO**[®] cellophane can improve distribution of your product and save you money

The bundling of anywhere from 3 to 24 packages of a kind is common practice with manufacturers. It divides the contents of their shipping cartons into easier-to-handle units, and protects their products during distribution and shelf storage.

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phane reduces shipping carton sizes, shipping weights and the amount of warehouse space needed to store packaging materials.

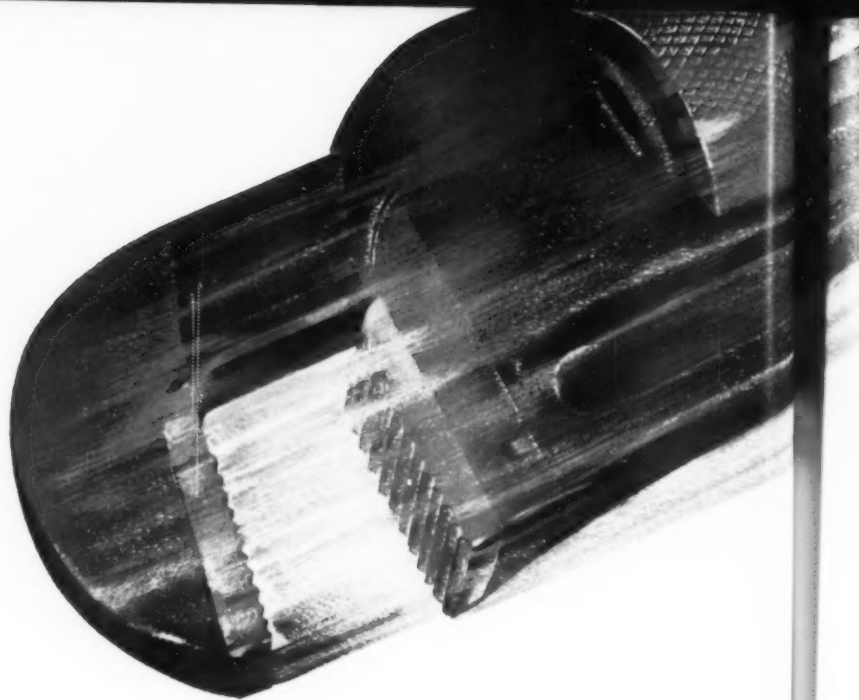
Cellophane bundling also wins favor with wholesalers. It enables them to make up orders easier because its true transparency permits 6-sided visibility. This means instant identification and faster count. Cellophane also gives complete protection against dust and moisture—and seals in freshness. So, you see, it actually becomes an extra selling tool.

Retailers also profit from cellophane bundling. Identification and handling are easier. Bundles can be used as shelf displays without unwrapping—thus assuring fresh, clean stock. And the sparkle of cellophane adds dramatic sales appeal to the products! Another advantage retailers like is the elimination of the disposal problem caused by bulky cartons and wraps.

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U. S. Patents Digest

Sterilizing and Packaging Beverages, William Geisler (to Cantrell & Cochrane Corp., New York, a corporation of Delaware), U.S. 2,862,528, Dec. 2. In a machine of the class described, the combination of: a carrier for containers, a reservoir for liquid to be packaged and a series of filling spouts attached to said reservoir and positioned to discharge into containers.

C-Ring Strip Package, Howard G. Brown (to Novelty Tool Co., Spencer, Mass., a corporation of Massachusetts), U.S. 2,862,612, Dec. 2. A C-ring strip package comprising a scored paperboard blank folded along the scorings and forming a receptacle having a bottom, a rear wall and two side walls, and which is open at the top and front.

Wrapper for Wound Filamentary Packages, Orlando A. Battista, Drexel Hill and Graeme G. Whytaw (to American Viscose Corp., Philadelphia, a corporation of Delaware), U.S. 2,862,611, Dec. 2. An assembly comprising an annular package of freshly prepared regenerated cellulose filamentary material and a shrinkable protective paper wrapper conformed to the package.

Means to Transfer Articles from Cases to a Conveyor, Charles Chalich (to Taylor Mfg. Co., Inc., Salisbury, N.C., a corporation of North Carolina), U.S. 2,862,634, Dec. 2. An article-handling machine having a carriage, article-engaging members depending from the carriage and a continuously driven, rearwardly moving and substantially horizontal conveyor.

Labeling Machine, Sydney E. Banks (to Morgan Fairest, Ltd., Sheffield, England), U.S. 2,862,638, Dec. 2. A labeling machine comprising a rotatable delivery drum with suction openings in its periphery and means to feed to the drum a close succession of articles to be labeled.

Flexible Dispensing Head for Pressurized Containers, Ralph D. Cooksley and William M. Lester, U.S. 2,862,648, Dec. 2. In a pressurized container, a container assembly having an outwardly extending nipple portion thereon, said nipple portion having a discharge opening and a seat adjacent to the lower end of the discharge opening.

Self-Forming Pouring Spout for Containers, Frank D. Bergstein (to Bergstein Packaging Trust, Cincinnati), U.S. 2,862,649, Dec. 2. In a dispensing container having a wall, a pouring opening defined in said wall by a flap.

Method for Packaging a Continuous Strand, Warren Wendell Drummond and William R. Steitz (to Owens-Corning Fiberglas Corp., Toledo, O., a corporation of Delaware), U.S. 2,863,208, Dec. 9. A method for accumulating a mass of a continuous flexible strand that comprises feeding said strand longitudinally along a linear path.

Machine for Packing Containers in Cases, Kaye B. Holstebro and Leander

H. Lippincott (to Emhart Mfg. Co., Hartford, Conn., a corporation of Delaware), U.S. 2,863,268, Dec. 9. In a machine for packing fibre milk containers or the like, a platform having a loading opening therein through which a load-group of such containers may pass vertically.

Packaging Machine, Harry Pokras (to Product Packaging Engineering, Culver City, Calif., a corporation of California), U.S. 2,863,269, Dec. 9. A packaging machine comprising a pair of heated drums disposed in substantial tangency, each of said drums having a ring of recesses and each surrounded by sealing surfaces.

Method of Forming Bags, Thomas E. Piazza (to Continental Can Co., New York, a corporation of New York), U.S. 2,863,365, Dec. 9. A method of forming a drawstring closure in the end of a flexible tubular bag section.

Box-Forming Machine, Oskar Dorfman (to Federal Carton Corp., a corporation of New York), U.S. 2,863,370, Dec. 9. A machine for folding a box blank into a box, comprising a normally flat female die having a central plate and four side plates hinged to the respective sides of said central plate.

Ornamental Bottle Seal and Method, Edward W. Owens (to The Celon Co., Madison, Wis., a corporation of Wisconsin), U.S. 2,863,582, Dec. 9. In combination with a bottle having a neck and a closure thereon, a stamp extending upwardly along one side of the neck across the top of the closure.

Device for Feeding Closure Caps, Harry E. Stover (to Anchor Hocking Glass Corp., Lancaster, O., a corporation of Delaware), U.S. 2,863,588, Dec. 9. In a magnetic cap-feed mechanism for continuously feeding metal caps into a cap chute, the combination of a rotatably mounted nonmagnetic disk.

Molded-Pulp Packaging Member, Richard L. Emery (to Keyes Fibre Co., Portland, Me., a corporation of Maine), U.S. 2,863,595, Dec. 9. A molded-pulp packing device comprising a substantially flat sheet divided into a plurality of panels hingedly connected.

Fibreboard Container, Henry Harrison (to The Greif Bros. Cooperage Corp., Delaware, O., a corporation of Delaware), U.S. 2,863,596, Dec. 9. A reinforced fibreboard container comprising an inner casing having four corrugated fibreboard side panels with their edges arranged in abutting relationship forming a complete enclosure for the sides of the casing.

Reinforced Corrugated Paperboard Container and Joint Therefor, Philip C. Strine (to International Paper Co., New York, a corporation of New York), U.S. 2,863,597, Dec. 9. A container made from corrugated board, laminated fibreboard or the like, comprising a tubular body portion.

Method and Apparatus for Forming and Filling Bags, Raymond H. Carter (to Slevopak Machinery Corp., Williamsburg, N.Y., a corporation of New York), U.S. 2,864,213, Dec. 16. A method of making and filling a bag formed of woven tubing, comprising the steps of cutting off a length of tubing and closing the lower end of it.

Packaging Apparatus, James S. Wilson, Douglas V. Perman, H. Herbert Hansen, Horace N. Broyles, George W. Evans, Paul Pavoni and William H. Kindel (to Mechanical Products, Inc., Denver, a corporation of Colorado), U.S. 2,864,218, Dec. 16. In an apparatus for packing a compressible article into a bag, a spout providing a converging entrance section and having a bottom, sides and a top pivoted about a transverse axis.

Carton Expanding and Transfer Mechanism, Harry E. Engleson and Elmer D. Sramek (to F. B. Redington Co., Chicago, a corporation of Delaware), U.S. 2,864,288, Dec. 16. A machine for expanding and transferring cartons, comprising means for removing the lowermost carton of a stack of collapsed cartons.

Dispensing Container, Harold N. Holcombe (to Eastern Box Co., Baltimore, a corporation of Maryland), U.S. 2,864,493, Dec. 16. A storage and dispensing container for rolled web materials or the like, comprising in combination a hollow enclosure of substantially the configuration of a rectangular parallelepiped.

Safety Closure for Bottle, Lindsay T. Crabbe (to Phoenix Metal Cap Co., Chicago, a corporation of New York), U.S. 2,864,519, Dec. 16. A safety closure for a bottle or the like, comprising a screw cap having a top with a dome.

Labeling Machine, Howard B. Tuthill (to Oliver Machinery Co., Grand Rapids, a corporation of Michigan), U.S. 2,864,522, Dec. 16. In a machine for attaching labels to containers, a movable carrier for said containers having a means for holding a container thereon for movement in the direction of the length of said container.

Knockdown Shipping Container, William L. Dalton, Chicago, U.S. 2,864,524, Dec. 16. A collapsible shipping container comprising a tubular structure forming four container side walls, one pair of opposed side walls of said tubular member having cleats extending parallel to the free edges of such walls.

Metal Can for Food Products, John Henchert (to Continental Can Co., New York, a corporation of New York), U.S. 2,864,528, Dec. 16. A metal container having a cone-shaped top terminating in a cylindrical neck, the upper end portion of said neck being outwardly and downwardly turned and merging downwardly into a cylindrical friction-sealing wall section.

Overcapped Container-Top Structure, John Henchert (to Continental Can Co.,

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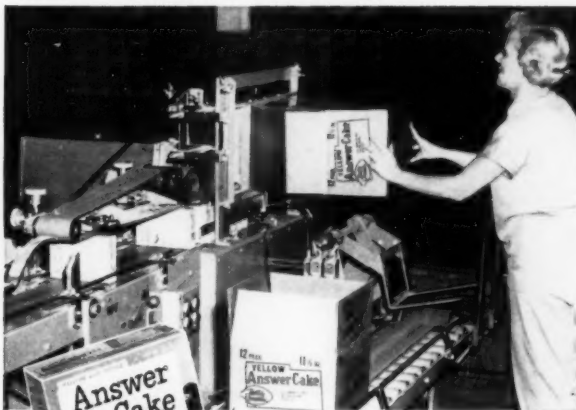
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Patents (continued)

New York, a corporation of New York). U.S. 2,864,529, Dec. 16. In a container of the character described, a body, a raised top having a central upstanding dispensing neck and seam secured to the upper end extremity of the body in a manner providing an annular groove inwardly of the seam.

Bottle Carrier, Harold G. Zastrow (to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota). U.S. 2,864,531, Dec. 16. A bottle carrier including a rectangular tray-shaped body with a pair of parallel slots in the bottom thereof.

Shipping Container for Fruits, Vegetables and Other Articles, Mark B. Royce (to Continental Can Co., New York, a corporation of New York). U.S. 2,864,545, Dec. 16. A shipping container comprising a one-piece paper-board body including a bottom panel and four side wall panels extending from the bottom panel.

Cover for Paper Container, Elmer T. Aldington (to American Can Co., New York, a corporation of New Jersey). U.S. 2,864,546, Dec. 16. A cover for a paper container, embodying laminated material in which one lamination is a metallic foil having dead-folding properties.

Reclosable Carton, Reynolds Guyer (to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota). U.S. 2,864,547, Dec. 16. A reclosable carton including a series of side walls connected in tubular relation.

Bag Header, Robert F. Windstrup, Edward Rose and Nicholas S. Miller (to Peters Machinery Co., Chicago, a corporation of Illinois). U.S. 2,865,152, Dec. 23. A bag-sealing machine having combined tucking and pre-sealing means operative to form gussets in the open end of a bag and to effect pre-sealing of the bag below the gussets.

Insert-Feeding Apparatus, William R. Coyne (to The Pillsbury Co., Minneapolis, a corporation of Delaware). U.S. 2,865,154, Dec. 23. Apparatus for feeding insert members one at a time into a series of open-topped containers from a stack of insert members, said apparatus comprising a frame.

Bottle-Filling Apparatus, Alden H. Wakeman (to The Creamery Package Mfg. Co., Chicago, a corporation of Illinois). U.S. 2,865,158, Dec. 23. An apparatus for use with a table rotatable about a vertical axis and provided with a plurality of vertically adjustable bottle pedestals arranged in symmetrical relation about the periphery of said table.

Feeder Cut-Out for Box-Making Machine, John Fradenburgh (to United States Automatic Box Machinery Co., Boston, a corporation of Massachusetts). U.S. 2,865,262, Dec. 23. In a box-making machine of the type described, means for feeding a succession of blanks at uniform intervals into said machine.

Apparatus for Making Glued Corrugated Cartons, Clifford A. Strand (to The International Paper Box Machine Co., Nashua, N.H., a corporation of New Hampshire). U.S. 2,865,263, Dec. 23. Apparatus for forming glued corrugated boxes, said apparatus comprising a box

form reciprocating axially within a channel and arranged to support the erected side walls and glue flaps of a box from the inside thereof.

Container-Inverting Machine, Robert A. Johnson and Homer W. Ohlhaber (to White Cap Co., Chicago, a corporation of Delaware). U.S. 2,865,411, Dec. 23. In a machine for rinsing and draining filled containers, a rotatable cage having a plurality of circumferentially spaced, horizontally extending runways, in each of which a row of open and filled containers (glass or other) is adapted to be positioned.

Suture Tube-Shipping Package, William A. Smart, Jr., and Thomas J. Connolly (to American Cyanamid Co., New York, a corporation of Maine). U.S. 2,865,501, Dec. 23. A shipping package for glass suture tubes, said package comprising in combination a plurality of sealed glass suture tubes in substantially parallel configuration with each other in a glass container.

Sterile Ampule Package, Solomon Reznick (to Sterling Drug, Inc., New York, a corporation of Delaware). U.S. 2,865,524, Dec. 23. A sterile ampule package comprising an outer container having a substantially rigid ampule positioned within said outer container.

Molded-Pulp Carton, Arthur W. Van Dyke (to Diamond Gardner Corp., New York, a corporation of Delaware). U.S. 2,865,547, Dec. 23. A molded-pulp carton comprising a top wall and at least three like cells hingedly joined to said top wall of the carton.

Molded-Pulp Container with Tear Strip, Charles L. Stewart (to Keyes Fibre Co., Portland, a corporation of Maine). U.S. 2,865,548, Dec. 23. A molded-pulp carton having two hinged-together, pocketed sections wherein the pockets of one section are complementary to those of the other section.

Carton, William H. Inman (to Bloomer Bros. Co., Newark, N.Y., a corporation of New York). U.S. 2,865,549, Dec. 23. A rectangular carton having bottom, front, rear and side walls and a cover, said cover having a top portion hingedly connected to said rear wall.

Apparatus for Printing Closures on Containers, Vincent W. Jezerski, Isaac L. Wilcox and Herman Pesch (to Seal-right-Oswego Falls Corp., Fulton, N.Y., a corporation of New York). U.S. 2,866,402, Dec. 30. Apparatus for printing closures on an advancing procession of containers, comprising a printing element movable downwardly in a vertical plane into printing engagement with the closure on the top of each container advancing in said procession.

Packages for Articles, Alexander Svirchek (to American Safety Razor Corp., Brooklyn, N.Y., a corporation of Virginia). U.S. 2,866,542, Dec. 30. A surgeon's-blade package comprising a plurality of sections each formed of sheet material having a natural grain such as aluminum foil or the like.

Carrying Device for Containers, Edward O. Then (to American Can Co., New York, a corporation of New Jersey). U.S. 2,866,543, Dec. 30. A unitary carrying package comprising a plurality of juxtaposed rectangular containers having at their top ends laterally projecting peripheral ledges.

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SEMI-WATERPROOF PAPERS. Book contains samples of this company's semi-waterproof papers, available in 26 and 30-in. rolls, two reams per roll embossed, and 4 reams per roll plain. Prices included. Matthias Paper Corp. (C-950)

TAPE DISPENSERS, LABEL MOISTENERS. 4-page illustrated brochure describes this company's lines of dispensers for 1½ to 3 in. reinforced and regular tape. Also lists its lines of moisteners for handling labels up to 6 in. wide. Seal-O-Matic Dispenser Corp. (C-951)

PORTABLE BAG LOADER. 4-page illustrated brochure describes this company's lines of portable bag loaders, designed for the insertion of albums and flat objects into polyethylene bags. Brochure also describes a portable heat sealer and loader machine. Gives prices for stocks of polyethylene record and album covers. Bradley's. (C-952)

SHEETS, RODS, TUBES. 64-page catalog gives price, specification and warehouse location data for this company's stocks of plastic sheets, rods, tubes, rolls, slabs and panels. Commercial Plastics & Supply Corp. (C-953)

TWIST-TO-TIE TAPES AND DISPENSERS. Information kit describes this company's plastic, single and two-color tapes for the packaging of vegetables, fruits, candy, toys, etc., in plastic bags. Also describes automatic and semi-automatic tape dispensers. Samples included. Plas-Ties Co. (C-954)

HEAT SEALING MACHINERY. 12-page illustrated brochure describes this company's lines of hand-, foot pedal- and power-operated pneumatic and electromagnetic heat sealing machines. Units produce seals up to 60 in. long at rates up to 20 seals per min. Vertrod Corp. (C-955)

GIFT BOWS. Illustrated brochure describes this company's custom designed, pre-tied bows and streamers for gift packages. Packaging Div., Shear-Prinz Assoc. (C-956)

THREE-STATION ROTARY VACUUM FORMER. 4-page illustrated brochure describes this company's line of three-station rotary vacuum formers, ranging from 30 by 36 in. to 48 by 84 in. in size. Units handle plastic sheets up to 4 by 6 ft.; have 28- and 50-in. strokes. Comet Industries. (C-957)

TEMPERATURE CONTROLS. 4-page technical bulletin describes transistorized amplifier relays for controlling heat sealing and processing temperatures on packaging machines. Minneapolis-Honeywell Regulator Company. (C-958)

PRINTING EQUIPMENT. 8-page illustrated brochure describes this company's 3-color flexographic stack press; its narrow web, 4-color and 2-color flexographic presses; and its lines of high-speed bag machines, and rewinders and slitters. Manhasset Machine Co., Inc. (C-959)

POWDER PACKAGE. Catalog sheet describes a flexible bag for packaging products that are extremely fine, have high specific

gravity and are exceptionally sensitive to moisture absorption — pharmaceuticals, baking powder, cake mixes, etc. Bag, available in color, is said to be strong, sift-proof, and moisture-proof. Sample included. Kehr Products Co. (C-960)

FLEXOGRAPHIC PRESSES. 4-page illustrated brochure describes this company's lines of 4- and 6-color presses. Machines print cellophane at 500 ft. per min. and polyethylene at 400 ft. per min. with splicing. Kidder Press Co., Inc. (C-961)

AUTOMATIC PACKAGING EQUIPMENT. 6-page illustrated brochure describes a machine that forms, weighs and fills, and seals up to 45 plastic and pouch bags per min. in one automatic operation. Also describes an accumulating table, an automatic portable polyethylene sealer, a label sealer, etc. Mercury Heat-Sealing Equipment Co. (C-962)

STRAPPING TAPE. 8-page illustrated brochure describes a pressure sensitive reinforced vinyl plastic tape for bundling, palletizing, reinforcing, unitizing and tear stripping. Johns-Manville, Dutch Brand Div. (C-963)

CAN PACKERS, CASE GLUERS. Catalog file contains illustrated brochure describing lines of automatic machines for case packing filled and empty cans; also an automatic case opener-former-positioner. Second illustrated brochure describes a line of automatic case gluers and compression units. Russell Div., Crompton & Knowles Packaging Corp. (C-964)

SEALS, SEALING MACHINES. 16-page illustrated brochure describes this firm's automatic and semi-automatic machines for the application of seals to bottles and jars at rates up to 7,500 per hour. Brochure also describes available reformed screw caps, vial seals, etc. Metal Closures, Ltd. (C-965)

STENCILING AND TAPING EQUIPMENT. 12-page illustrated folder describes available fountain brushes and inks for stenciling on paper, wood, steel, cloth, etc. Also describes electric machines for taping cartons of uniform and mixed sizes. Marsh Co. (C-966)

WRAPPING AND BUNDLING ADHESIVES. 8-page illustrated brochure discusses the uses of this company's wrapping and bundling adhesives in the packaging of baked goods, soap, confectionery, tobacco, bandages, etc. Lists specific adhesives for each application. Paisley Products, Inc., Div. of Morningstar, Nicol, Inc. (C-967)

AEROSOL VALVES. 4-page illustrated brochure describes five models of this company's aerosol valves for the dispensing of foam products, for aerosol products and for three-phase products, such as window cleaning and moth proofing formulations. Valve Div., The Risdon Manufacturing Co. (C-968)

CODE MARKING PRESS. 4-page brochure describes a press that imprints lot numbers, dates, flavors, etc., on flat, folded cartons and labels. Press prints from standard printers type, linotype, rubber plates or electros. B. Verner & Co., Inc. (C-969)

DIE CUTTER CREASER. Technical data sheet describes a line of web-fed die cutter-creasers that operate at speeds of from 3000 to 15,000 impressions per hour. The Precise Engineering Co. (C-970)

FLEXIBLE PACKAGING MATERIALS. 4-page questionnaire serves as a check list for engineers designing packages for foods, drugs, soaps, candies, tobaccos, chemicals, etc. Covers requirements of product, functions of packaging, methods of distribution, etc. Riegel Paper Corp. (C-971)

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- 4 MAIL — no postage required

EQUIPMENT • SUPPLIES • SERVICES

TICKET AND LABEL MARKER. 4-page illustrated brochure describes a machine for imprinting box and pressure sensitive bag saddle, gummed and ungummed identification labels. Up to 4 by 1½ in. at rates of up to 144 per min. Soabar Company. (C-972)

FOIL. 21-page illustrated brochure, complete with samples, describes this company's range of foils, their finishes, their storage and their uses in packaging and other applications. Packaging Div., Venesta Ltd. (C-973)

SPECIALTY BAGS. Illustrated idea card file contains 32 uses for this company's specialty printed paper bags. Uses include the packaging of ice cream, waxing cloths, fertilizers, ironing boards, books, garbage, etc. Thilmany Pulp & Paper Co. (C-974)

POLYETHYLENE. Series of illustrated brochures describe features of this company's grades of polyethylene as used in the manufacture of plastic films, food packaging, food cartons, polishes, color concentrates, etc. Semet-Solvay Petrochemical Div., Allied Chem. & Dye Corp. (C-975)

PRINTING ON CORRUGATED. 28-page illustrated booklet discusses the merchandising advantages, color and design considerations and actual techniques for the printing of corrugated boxes and display stands. Hinde & Dauch. (C-976)

TRANSPARENT FILMS. 8-page illustrated brochure describes the uses of this firm's cellulose nitrate, cellulose acetate and cellulose triacetate transparent films as used in packaging, display cards, adhesive and lamination applications. Samples included. BX Plastics, Ltd. (C-977)

BULK HANDLING CONTAINERS. 4-page illustrated brochure describes steel- and aluminum-fabricated sheeting and storage containers suitable for handling flowable dry products. Containers, in sizes from 36 to 88 cubic ft., hold loads up to 6,000 lbs., seal hermetically. The Powell Pressed Steel Co. (C-978)

ADHESIVES FOR BOTTLE LABELS. 12-page bulletin gives specifications and features of this company's lines of bottle labeling, ice-proof and case sealing adhesives. H. B. Fuller Co. (C-979)

ROLL-LEAF IMPRINTING ATTACHMENT. Illustrated data sheet describes a roll-leaf imprinting attachment for wrapping and bag-making machines that uses colored roll-leaf instead of ink; imprints on wax paper, cellophane, foil, etc. Gottscho. (C-980)

POLYESTER FILM. 12-page illustrated brochure describes "Videne" laminating and surfacing film, heat-and-pressure bondable to almost any surface as a protective and decorative surface. Film is also recommended for skin-type wrapping of meats. Packaging Films Dept. The Good-year Tire & Rubber Company. (C-981)

MULTI-PROCESS PRINTING PRESSES. 22-page illustrated catalog describes this company's flat-bed presses and auxiliary equipment for the printing of labels, tags, tickets, forms, display cards, cartons, lids, etc. New Era Mfg. Co. (C-982)

ALUMINUM FOIL CONSULTING SERVICE. 12-page illustrated brochure describes the company's consulting services in package development, design, processing and equipment. Kaiser Aluminum & Chemical Sales. (C-983)

AUTOMATIC BUTTER-OLEO PACKAGERS. 8-page illustrated catalog describes this

company's lines of machines for the automatic precutting, printing, forming, wrapping, cartoning, and overwrapping of butter, oleomargarine and similar products. Lynch Corp. (C-984)

LABELING MACHINES. 4-page illustrated brochure describes an adjustable automatic machine that applies foil and paper labels, from postage-stamp size to 6 by 7 in., at speeds from 40 to 150 per min. MRM Co., Inc. (C-985)

PROPELLANT FILLERS. 4-page technical bulletin describes this company's line of fillers with capacities ranging from 40 to 460 grams. Brochure also describes a propellant accumulator pump with removable weights to allow use on various propellant formulations. Mojonnier Associates, Inc. (C-986)

ENGRAVING EQUIPMENT. 4-page illustrated brochure describes a name plate engraver for engraving on plastic and metal panels, signs, dials, name plates. Also describes a name plate edging machine, a machine that grinds all types of engraving cutters, etc. Includes prices. Mico Instrument Co. (C-987)

SEMI-RIGID PLASTIC PACKAGING. 23-page brochure shows how to design round and oval semi-rigid transparent plastic packages. Also shows available stock oval, square, rectangular, half-round and metal bottom plastic containers; and covers, handles, etc. J-E Plastics Packaging Co., Inc. (C-988)

BAGS, LINERS, PADS. 6-page folder lists uses for this company's padded and unpadded, reinforced, and insulated bags. Folder also presents uses for company's lines of insulating liners, paper pads and blankets, bottle bags and sleeves and multi-pack bags. Jiffy Mfg. Co. (C-989)

GRAVURE PRESSES. Illustrated 4-page brochure describes a line of gravure presses designed to print cellophane, foil, paper, etc. in 30- to 42-in. widths at production speeds from 500 to 600 ft. per min. Parsons & Whittemore Graphic Corp. (C-990)

COLLECTORS AND PACKERS. Illustrated 6-page brochure describes lines of automatic machines for the loading of cartons, bags and cans into balers, and display and shipping cases according to predetermined horizontal patterns. Standard-Knapp, Div. of Emhart Mfg. Co. (C-991)

MEAT-POULTRY WRAP. Technical information, printed on sample, describes a strong, no-stain, odorless wrap for meat and poultry. Paper is treated with polymerized plastic. Central States Paper & Bag Co. (C-992)

QUAD STAYER. 6-page illustrated brochure describes a quad stayer that features uninterrupted feeding, elimination of double blank feeding and resultant jams, 48-in. blank stack capacity, a delivery conveyor design permitting either end or side discharge, etc. FMC Packaging Machinery Div., FMC Corp. (C-993)

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Packaging Show news

All reports indicate that next month's 28th National Packaging Exposition and Conference will present a wealth of new ideas, products and techniques designed to reduce packaging costs, increase production efficiency and upgrade the package's merchandising appeal. Sponsored by American Management Assn., the show will be held April 13 to 17 at the International Amphitheatre, Chicago. The conference will run from April 13 to 15 at the Palmer House.

As in the past years, exhibits (which number about 350) will cover the entire range of packaging functions—from basic materials to machinery and the finished package. Among the trends that will be in evidence at the 1959 show, say AMA officials, are: greater emphasis on plastics and aluminum foil, more use of packaging materials in combination, lighter but stronger fibre and corrugated shipping containers, and a continuation of the move toward systematized, integrated, automatic packaging machinery.

Continuing the practice begun at last year's exposition, a \$2 fee will be charged for admission to the show. The conference registration fee is \$18 for AMA members, \$24 for non-members. Registration forms can be obtained from the show managers, Clapp & Poliak, Inc., 341 Madison Ave., New York 17.

This year's conference sessions—scheduled for the morning hours—will analyze the increasingly important role of packaging in industry today. At the opening meeting, top executives representing consumer and industrial companies will examine and discuss the entire packaging process—from product-package inception to the ultimate user. At concurrent panel sessions on the second day, participants will discuss package design and package utility, manufacturing and handling. The last day, concurrent panel discussions on consumer-goods packaging and industrial packaging will be held.

The five-day show opens each morning at 10 o'clock. It closes at 6 o'clock each evening, except for the second and fifth days, when closing time is 9 p.m. and 4 p.m., respectively. Conference hours are: 10 a.m. to noon the first day, 9:30 a.m. to noon each of the next two days.

Assistance in making hotel reser-

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PACKAGE MARKING either makes money or wastes it

Readable, attractive marking made by Markem machines on your boxes or labels helps them from the moment they're marked to the time they're used — and can even help future sales as well. Good marking speeds handling . . . reduces waste and packing errors . . . allows quick selection by customers . . . simplifies and encourages reordering . . . carries the "quality" message of modern package design.

In contrast — hard-to-read, uneven, "home-made" marking is a hindrance to your package or product from beginning to end — and can actually waste thousands of dollars a year.

And a Markem marking method makes important "in-plant" savings as well. The right Markem machine, type and specialty ink working in your plant marks the *right* quantities at the right time — with savings in inventory, labor and delivery time . . . eliminates waste from obsolescence . . . handles "short runs" rapidly and economically . . . provides flexibility that allows *one machine to do a variety of marking jobs.*

Call your local Markem man or write directly, enclosing samples and requirements. Markem Machine Co., Keene 1, N. H.

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► In a new art such as printing with flexible materials it's a great help to have a head start. Wilsolite technical service representatives are here to give you this help. These men make it easy for you to know what has come before in this particular kind of application or what has been accomplished in that class of materials.

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WAREHOUSES AND SERVICE COAST TO COAST AND CANADA

Speed Packaging— Fill Direct from Original Drum!



Graco's Fast-Flo Pump speeds packaging of fluids — moves material *direct from drum* to filling operation. Accurate meter control can deliver exact amount as required. Lightweight Fast-Flo is easily changed from drum to drum without slowing assembly line. Pump uses air only when delivering fluid. Can empty full size drum in less than three minutes!

Send for more information about the amazing Graco Fast-Flo pump that's suited for large or small packaging volume. The economical Fast-Flo can transfer, agitate and dispense. Use it for a supply pump, for mixing or spraying. It handles fluids as thin as alcohol — as thick as glue. Here's the pump that can save you money!




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(See Phone Book Yellow Pages, Spraying, for Graco Suppliers)

MATADOR Bag Machine



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For converting kraft paper, mounted aluminum foil, glassine, sulphite, etc. in a wide range of sizes into flat and square bags.

Send for our new bag size chart.

HEINRICH EQUIPMENT CORP.
111 Eighth Avenue, New York 11, N. Y.

vations will be provided by the Chicago Convention Bureau. Application blanks for hotel accommodations may be obtained by writing the Housing Bureau, Chicago Convention Bureau, Suite 900, 134 N. LaSalle St., Chicago 2.

As a service to packaging personnel who wish to obtain follow-up data offered by show exhibitors, AMA is offering an "Inquiry Time Saver Plate" similar to a charge-account card. The plastic plate, which is reverse imprinted with an individual's name, title, company and address, is intended to eliminate the need for a show visitor to spend time filling out request forms for additional information. The holder simply hands his plate to the exhibitor, who machine-imprints the data thereon and returns the plate—all in a matter of seconds. Plates are available without charge by writing (before March 21) to AMA National Packaging Exposition, 341 Madison Ave., New York 17. In writing for your plate, specify your name, title, company name, address, city, postal zone and state. •

Torrent of toothpaste

[Continued from page 83]

of the chief factors responsible for this filling-machine's efficiency.

In action, the collets are lowered into the tubes, which are whirled as the collets expand and grip the inner surfaces. Photo-eyes pick up registration marks on the tubes and transmit electronic impulses to the brakes, which bring each spinning tube to a rapid stop in correct position. The collets are then withdrawn.

Cleaning, filling and sealing components are similar in mechanical action to those on other tube fillers. However, much of the operating mechanism has been elevated, which permits the components to be moved closer together and thus save space around the oval "pony track" containing the tube holders.

Principal features of the paper bundler that enable it to handle the output of this high-speed line are: (1) straight-line action, (2) an ingenious collator and (3) a rotary rubber-plate printer that stamps product information on the natural-kraft paper wrappers to eliminate the need for end labels. Cartons are assembled in groups of 12 by the collator—a flighted, chain-mounted

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Packing station at Land O'Lakes Creameries, Inc., Thief River Falls, Minnesota.

HOERNER DESIGNED CONTAINER

*"Doubles in Brass". . . Saves Time, Cuts Costs**

When Land O'Lakes Creameries, Inc. changed to a liquid freezing process on their fine Oven Ready Turkeys, a special container was needed that "Doubled in Brass" . . . held turkeys for final freezing and served as a shipping container.

Enter a Hoerner Packaging Engineer working right in the Thief River Falls, Minn. plant of Land O'Lakes to solve the problem. His recommendations and designs resulted not only in a double-duty container but eliminated two handling steps with a resultant saving in time and money.

Prior to using the liquid freeze process, Land O'Lakes froze turkeys by blast freezing. Birds were bagged, placed individually on freezing racks, fork-lifted into blast freezers. Once frozen, they were boxed and shipped.

In the liquid freeze process birds moved from the bagging operation directly to liquid freezing tanks which serve to set the natural color of the bird but do not completely freeze the bird. From the tanks the birds are put in holding freezers to complete the freezing operation.

The Hoerner Packaging Engineer designed a container with two inch diameter offset holes, die-cut in sides and top and bottom of box. The holes are aligned when the bottom is placed in the inverted top, allowing for circulation of sub zero air. Thus it becomes a double-strength carton to hold birds for final freezing. When ready for shipment, the covers are reversed, ergo, the holes are not aligned, the container is completely closed for shipping. Truly a packaging job that doubles in brass.

The costly freezing rack operation with handling and rehandling of turkeys was eliminated. Obviously, the elimination of the two steps resulted in time and cost saving to Land O'Lakes.

HOW A HOERNER PACKAGING ENGINEER CAN HELP YOU

If you package things, call the Hoerner plant nearest you. A Packaging Engineer will study your operation without obligation. He can increase your profit margin by reducing labor and material costs and shipping losses. All through improved packaging with corrugated. Call today.

*Packaging Engineer responsible:

Ed Thorson, Minneapolis Plant



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Corrugated Specialists for Mid-America

GENERAL OFFICES - 600 M

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elevator that catches three full cartons and lowers them into place on the machine conveyor, then piles successive groups of three on top before a chain-mounted lug sweeps the group forward into the wrapper. Overwrapped cartons are discharged to a hand case-off table at the rate of 25 per minute.

Both fillers and the cartoner are driven by a 7½-hp. DC motor operating through a standard gear box. Power is supplied by an individual generator. This combination permits line speed to be varied directly through a rheostat instead of through a more complex variable-speed gear box. A jack shaft running the full length of the cartoner operates all mechanical components. A single power take-off from this shaft drives the two fillers. When one filler is disengaged from the line, the shuttle can be quickly adjusted for the lower output by a simple change in linkage.

Once again, with this installation, rotary mechanical elements have proved their ability to provide smooth operation at high line speeds—an advance that will benefit all packagers requiring carton set-up and tube-filling equipment. Applications of the basic rotary-registration and set-up components in other packaging machines may well spread the benefits of the equipment across the entire packaging field. ●

See-through card pack

[Continued from page 85]

at high production-rate speed.

This new stretch-window packaging technique, apparently, is applicable to a wide variety of shapes, requiring only custom design of the die-cut window and the casting of aluminum molds for pre-forming.

It is possible to enfold more than one object on the same card, merely by having cards prefabricated with more than one window.

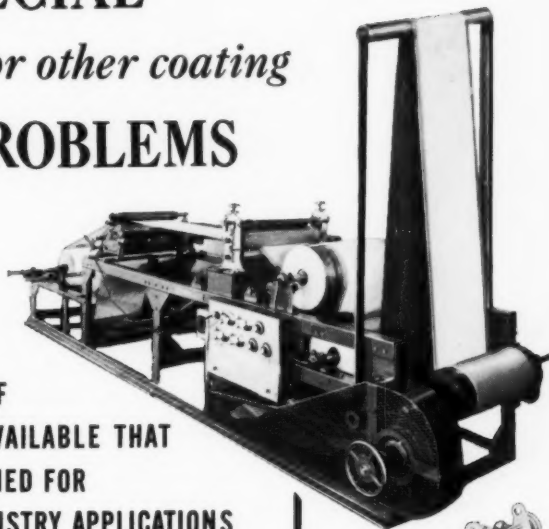
The see-through feature is not essential if a user prefers a paperboard back fold. At least two applications will be on the market soon using paperboard backing, with the film stretched only over the face of the enfolded object. In this case, the back of the card may be used for promotional copy and directions, while the forward thrust of the object from the paperboard back gives full dimension in display to the product so packaged. ●

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TOPSIDE OR UNDERSIDE COATER

Applies solid or strip coating on traveling webs (vertical or horizontal).



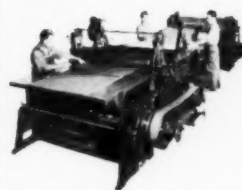
AUTOMATIC FEED CONVEYOR GLUER

For high speed coating production. Equipped with drying oven.



CYLINDRICAL TUBE LABELER

Automatically labels cylindrical paper tubes.



WEB AND SHEET LAMINATOR

Combines sheets or webs of materials such as cork, fibreboard, etc.



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TETERBORO, N. J.

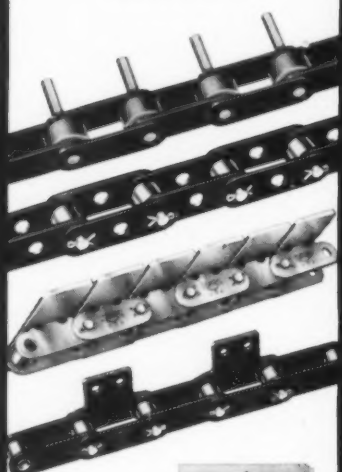
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

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... get complete information about smooth operating, long wearing, trouble free DIAMOND Conveyor Chain and attachments for all product handling.

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New lined drums

Specially lined 55-gal. steel drums are being used by National Casein of New Jersey for packaging the catalyst component of its urea formaldehyde resin adhesive, manufactured at its Riverton, N. J., plant, and used in bonding laminated plywoods and other wood assemblies. The catalyst, mixed at time of use, presented a packaging problem because of its reaction with steel.

The new drums have a specially compounded, pigmented phenolic lining. It is applied by techniques that are said to assure a continuous, tightly bonded internal "envelope" for the product. Three factors enable this envelope to resist the penetration of ammonium salts in the catalyst: (1) a five-step phosphatizing operation to prepare the steel surfaces for a tight coating; (2) uniform coverage of the steel by the lining material, and (3) instrument-controlled baking cycles.

SUPPLIES AND SERVICES: Lined drums by Jones & Laughlin Steel Corp., Pittsburgh 30.

Polyester films

[Continued from page 114]

cations may be divided into three classifications: protective laminates, semi-rigid fabrication and skin packaging.

Protective lamination includes lamination of identification cards, maps, pictures, documents and other items. The excellent bonding of Scotchpak film to paper and card stock results in internal delamination of the paper when an attempt is made to peel the film from the stock. Such laminations are virtually tamperproof because the film resists solvents, has excellent abrasion and wear resistance, and good tensile and tear strength. Other desirable properties include flexibility, resistance to cracking, transparency and dimensional stability. A thin-caliper film can be used effectively because of its resistance to aging and discoloration.

Semi-rigid fabrications result from Scotchpak-paper laminations using heavy-type paper. These constructions, when properly fabricated, will hold liquids in large quantities, including oil. Previous attempts to use various bags made of plastic films inside a paper carton have been only



SPOTLIGHT YOUR PRODUCT WITH



WANT POTENT POINT OF SALE IMPACT? THEN PUT OUTSERT FOLDERS ON YOUR CONTAINERS . . . THEY'LL STAND OUT FROM COMPETITIVE BRANDS. THESE COMPACT, SEALED FOLDERS ON THE OUTSIDE OF YOUR PACKAGE GIVE YOUR PRODUCT THAT SOMETHING EXTRA THAT WILL FOCUS ATTENTION AND CREATE IMPULSE BUYING. USE OUTSERT FOLDERS TO ADVERTISE YOUR OTHER PRODUCTS, TO OFFER PREMIUMS, GIVE RECIPES AND SUGGESTIONS. THEY CAN BE AUTOMATICALLY APPLIED TO CONTAINERS IN YOUR PRESENT PRODUCTION LINE WITH NO SLOW DOWN. WRITE OR CALL TODAY FOR COMPLETE DETAILS.

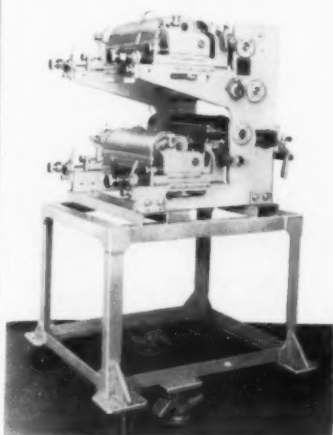


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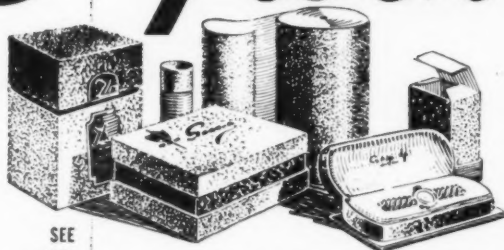


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—Claremont Flock... those tiny clipped-lengths of luxurious cotton and regal rayon. We market this irresistible outer raiment in bulk to paper processors, product manufacturers, packaging specialists and display builders who, for dramatic enrichment, apply it to paper, glass, metal, cork, plaster and similar materials.

Flock is a fascinating stimulant—and for pennies, an ounce adds a pound of allure. Check your suppliers—or, for complete information, feel free to contact us direct.

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- BEAUTY
- EYE-APPEAL
- DISPLAYABILITY
- PROTECTION

...and is the most economical, too!

The AMSCOMATIC 100 PACKAGING UNIT

produces a tight-to-product, edge-sealed polyethylene package automatically.



The Amscopic Packaging Method obsoletes ordinary wrapping and bagging methods for two good reasons: *economy* and *appearance*.

If you are presently packaging in polyethylene (or would like to package your product in polyethylene) the Amscopic Packaging Method will probably be perfect for you.

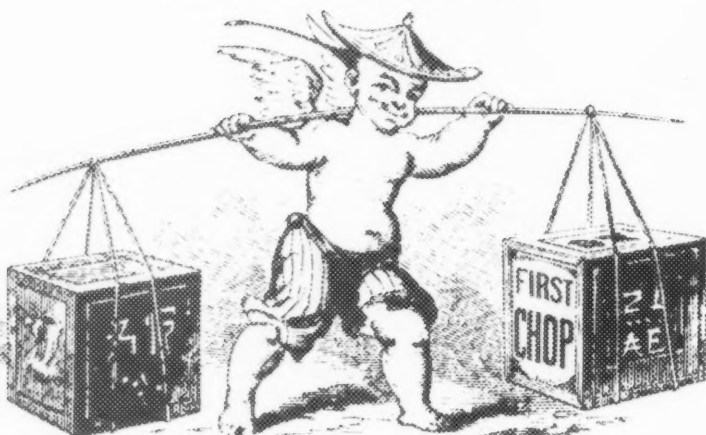


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"there is only one reason for designing a package . . . to sell more of a product"

PACKAGE



DESIGN

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are you acquainted with

the manufacturers' literature page

You ought to be. It's the page, in every issue of MODERN PACKAGING Magazine, that describes a wide variety of pamphlets, brochures, and other manufacturers' publications which are currently available *without charge*.

To obtain any of the literature which is listed, you merely fill in and mail the

postage-free reply card. We do the rest. Look for the Manufacturers' Literature Page in each issue of MODERN PACKAGING. It is easy to recognize because it is printed on heavy paper. It is your key to detailed information about packaging equipment, supplies and services.

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partially successful. Laboratory studies indicated that mechanical stress cracking occurred at points of high mechanical stress and flex. This problem can be eliminated by laminating Scotchpak film to boxboard and employing the proper semi-rigid carton design. This also permits a reduction in the weight of the paperboard. Preliminary laboratory and cross-country shipping tests have indicated excellent performance for certain carton designs and fabrications. These same performance tests have caused failure on bag-carton shipments.

Skin packaging is a relatively recent development in the packaging field. This process has several advantages over other packaging methods. It provides full visibility to the printing beneath. It affords a tamper-proof package and protects the product from moisture. Film characteristics that are desirable include shelf life, protective qualities, machine handling and low cost. Scotchpak polyester film offers indefinite shelf life. It forms an excellent barrier against gas and moisture. It resists grease and oil. Its excellent strength prevents shattering when punctured. Transparency of the film gives added sparkle to the package. Thin-caliper film can be used because of its strength, and storage and handling properties are simplified while cost is minimized. Elimination of coated board effects a substantial saving; Scotchpak film adheres directly to an uncoated board without using perforations. The draw-down with Scotchpak film is good when skin packaging is applied to thin articles.

Another significant application involving the heat-sealing property of Scotchpak polyester film is the lamination of film to cloth to obtain a barrier material.

Just recently, Scotchpak film No. A22 was introduced to the packaging industry as a military barrier material. This film passes the rigid specifications of MIL-B-131C for a flexible barrier and packaging material. It consists of scrim cloth bonded to a 20A20-type metalized Scotchpak film. Some important properties of this material are its low WVTR, tensile strength and resistance to cracking when flexed.

The chemical inertness of the film can be of value generally in the vast military packaging field. The resist-



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A SHIPPING CONTAINER PLAYS A DUAL ROLE

Gone are the days when a corrugated box was just "something to protect products in shipping." Improved printing techniques, used imaginatively, elevate your shipping container to an important new role in selling, advertising and merchandising.

That's where St. Regis Seminole Kraft Linerboard helps put your trade-mark, brand name and sales message in the spotlight. Thanks to its smoother, uniform surface and light color, Seminole gives unprecedented crispness and clarity to printing. When you talk to your boxmaker, specify St. Regis Seminole. For protection and printability, there's no finer linerboard than Seminole.

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19

ance of the film to preservatives, oil, grease and corrosion inhibitors contributes to its use in this important area. Not only will the film resist the effects of the contents, but because of its transparency, the contents can be easily identified. A simplified cataloging system results. Identification is permanent because of easy printability.

Some Scotchpak films have potential uses in military packaging applications requiring temperature resistance, vacuum forming and rigid packaging.

New applications for films require films with special design properties. With the assistance of new 3M film technologies, many difficult problems can be overcome to open up new fields for a variety of films.

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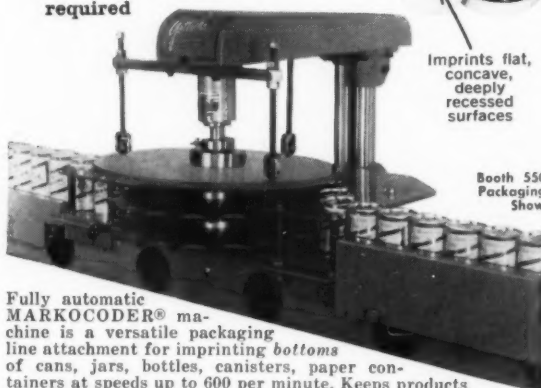


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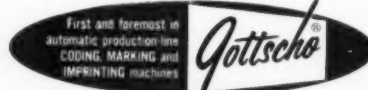


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Plastics conference

Newest developments in plastic films and packaging machines to handle them, applications of plastics in packaging and the design of plastics containers for food, drug and general products got a thorough airing before an audience of 150 packaging men at a recent two-and-a-half-day Special Plastic Packaging Conference sponsored by American Management Assn. in New York. The session was under the joint chairmanship of Frederick W. Langner, package coordinator for Socony Mobil Oil Co., and Henry Schniewind, vice president of Spring Mills.

A highlight of the meeting was the opening session, where six industry experts revealed the latest laboratory and application facts on branched or low-density polyethylene and nylon, high-density polyethylene, polypropylene, polyethylene foams, biaxially oriented polystyrene sheet and film, polyester film and polyethylene copolymers.

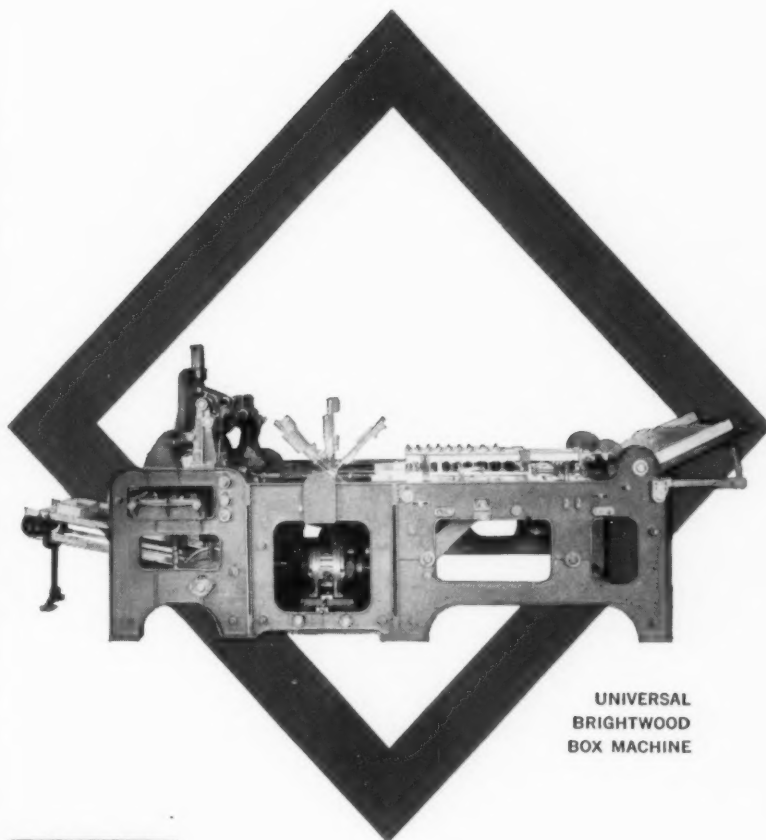
While the experts tended to disagree on what particular packaging markets each material would fill, there was no disagreement on the fact that these plastics have been developed to the point where they will be serious competitors in many packaging areas.

This impression was strengthened by further sessions on packaging machinery, methods and costs and types of containers formed from plastics materials.

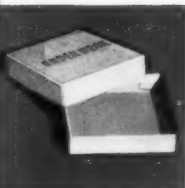
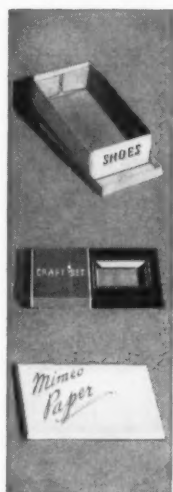
Efficiency and speed of new equipment for thermoforming, overwrapping, injection molding, laminating and sealing were spelled out by six speakers at the discussion on machinery. Noteworthy is the fact that seven companies now provide overwrapping machines reportedly capable of handling polyethylene film at good operating speeds.

Stressing the fact that novelty alone is not enough to make a success of plastics packages—but must be joined by low cost and performance—seven speakers at the methods and costs panel underscored improvements in filling and closing, decorating, coating and formation of rigid containers, bags and pouches that have provided these last two vital factors in the plastic packaging picture.

Merchandising advantages of plastics packages were not neglected



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either. In a final session, four speakers cited examples of general merchandise, food and drug packages that had failed or succeeded. Here, the emphasis was on basic principles of economy, product protection, convenience and aesthetics.

At an intermediate session, the audience was informed of progress made by the plastics industry in Russia and told that there is virtually no application of plastics to packaging in the USSR. •

Self-service packaging

Through improvements in packaging, price marking and unitizing of produce for self service, supermarkets can show weekly savings ranging from \$22 to \$67 per store, depending on sales volume, the United States Department of Agriculture's Agricultural Marketing Service reports. The economies were achieved through development of methods of increasing the efficiency of food wholesaling and retailing as part of a broad research program designed to reduce the cost of marketing farm products.

Following are some of the highlights of the study:

1. The least expensive method of wrapping produce is the use of a cellophane band or sleeve, eliminating two end seals and so reducing the cost of labor as well as packaging-materials cost.

2. The most effective method of wrapping produce is the "nest" technique. With this technique, labor and materials costs are 11% less than when using a seal plate and 6% less than when the product is placed in a tray with its face up and the package then flipped over and sealed.

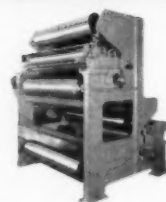
3. A specially designed packaging table required 36% less labor than a bench-type wrap station and 30% less than a conventional individual-wrap table.

4. In filling polyethylene bags, a specially designed bagging table can save \$1.70 per 1,000 bags compared with hand filling.

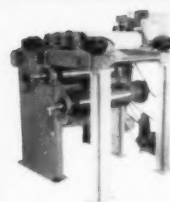
5. For closing a polyethylene bag, pressure-sensitive crepe tape in a semi-automatic dispenser is the cheapest, costing \$3.10 per 1,000 bags compared with \$7.04 for the most expensive, a saddle tag stapled over the mouth of the bag.

6. The cheapest method of com-

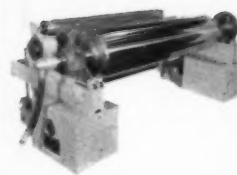
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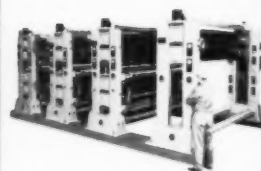
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example, an Inland customer recently became interested in waterproofing his containers because of reports that some of them were being exposed to rain and moisture. An Inland survey revealed that very few of his containers were being exposed, and even those were affording adequate protection to the product. Therefore, even the least expensive type of waterproofing would not have been justified.

Just how good should *your* corrugated containers be? It pays to get the right answer from your Inland Package Engineer. Call him for every corrugated requirement. He is a *specialist* in his field.

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pletely wrapping lettuce is hand wrapping with cellophane.

These findings are based on improvements installed by the Government agency in four supermarkets and two retail organizations. Complete details are published in "Packaging and Price-Marking Produce in Retail Food Stores," Marketing Research Report No. 278, Marketing Research Div., Agricultural Marketing Service, U. S. Dept. of Agriculture. Copies may be obtained for 50 cents each from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. •

Invisible barrier to oil

[Continued from page 105]

to binder twine. Before adopting the new package, therefore, Harvester researchers satisfied themselves that no farmer would lose a cow because of stray twine left around the feeding lot.

Twin balls of baler twine, each containing 4,500 ft., or six smaller balls of binder twine are individually wrapped in the chemically impregnated chip-grade paper and packed in corrugated cartons.

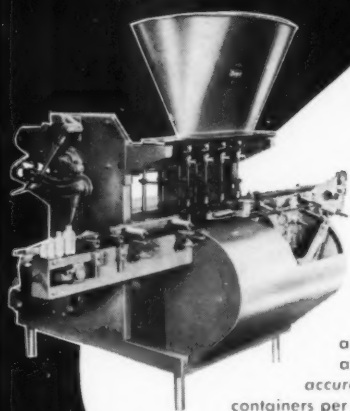
The boxes themselves are slotted, full-overlap, end-opening corrugated cartons. Wall construction includes a 33-lb. bleached white outer liner, a 26-lb. semi-chemical medium B flute and a 26-lb. kraft inner liner.

Shippers for the company's two twine brands are given similar design treatment, with color variations. A sell message prominent on the top of the carton says: "This carton is oil resistant, specially treated by a new process assuring factory-fresh twine every time."

Harvester believes the carton's advantages outweigh its added cost. Besides display effectiveness, cartons give better product protection in shipment to the company's 5,000 farm-equipment dealers around the country and are much superior in handling and piling, says IH.

In production since June, the new package has reportedly held up well in storage. It is being introduced now as the spring growing season begins. The twine is produced and packaged in Harvester's New Orleans plant, most automated of the IH chain. •

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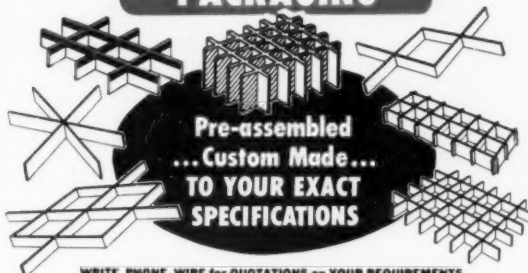
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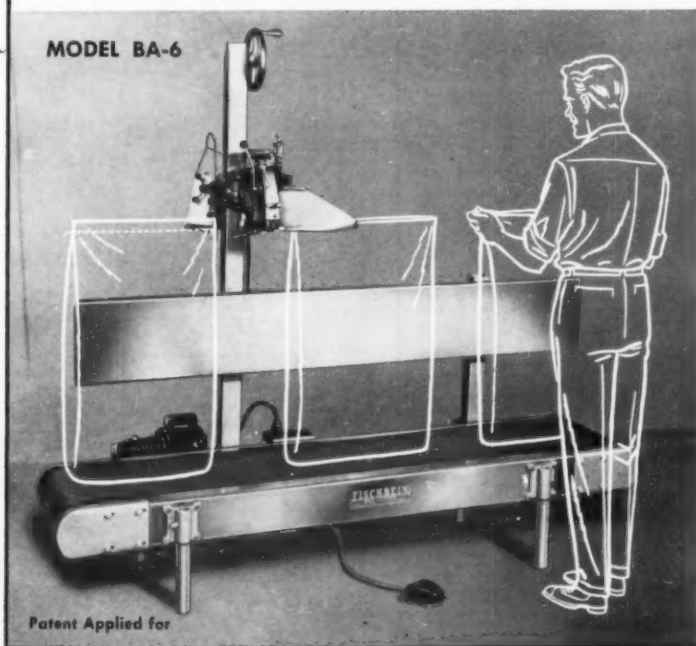
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An automatic closing unit. The bags themselves start the sewing operation when they reach the sewing head. After sewing is completed, thread is cut automatically and sewing action stops as conveyor belt continues to move bag.



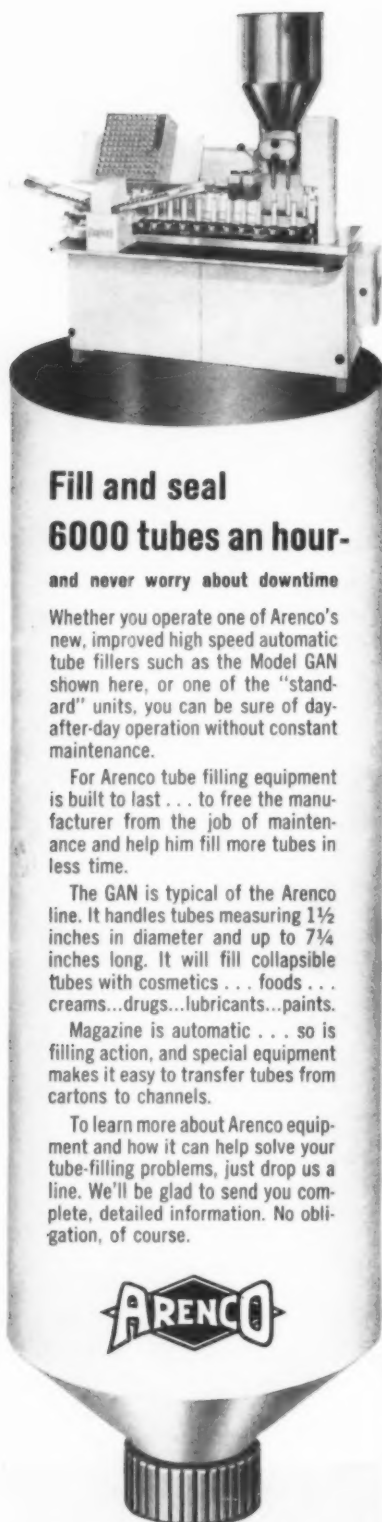
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The GAN is typical of the Arenco line. It handles tubes measuring 1½ inches in diameter and up to 7¼ inches long. It will fill collapsible tubes with cosmetics . . . foods . . . creams . . . drugs . . . lubricants . . . paints.

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Savings through increased packaging speed and decreased in-transit damage are reported by Hartzell Industries, Piqua, Ohio, with the use of a new pneumatic steel strapper for tensioning, sealing and cutting. The unit, used in the packaging of veneer sheets, has reduced labor costs by approximately four manhours a day, Hartzell says, and customers have reported improved arrival condition of the bundles. It is claimed that the unit will save time and money in almost every industry where steel strapping is used. It is a hand tool and all operations are pneumatically powered and controlled by two levers on the handle.

SUPPLIES AND SERVICES: M4 Pneumatic Steelstrapper by Acme Steel Co., Chicago 27. •

Quick-change filler

[Continued from page 103]

air to escape from the container.

The recharging operation of each measuring valve is accomplished with the lower filling valve closed. Through cam action, the funnel assembly is moved to its bottom position, disengaging it from the measuring sleeve and allowing milk to flow by gravity from the filler bowl into the sleeve. The milk rises up between the sleeve and the plunger until it reaches the level of the milk in the filler bowl. As the funnel is raised by cam action, it slides over a kidney-shaped ring in the end of the measuring sleeve, isolating the milk in the sleeve from the filler bowl. Then as the funnel continues to the up position, the milk in the chamber is raised and all but the measured volume returns to the filler bowl via the overflow ports, insuring constant fill and adequate circulation. At this point, the valve is opened by a cam and discharges the milk into the carton, which is raised by a lifter in synchronization with the funnel. Carton filling action takes a 245 deg. arc on the rotary unit; recovery utilizes the remaining 115 deg.

Little effort was required to fit auxiliary equipment to the new fillers. Cartons are fed by chute from second-floor storage points and a reciprocating feed is used to pass the cartons into a conventional vacuum-cup opener for the tab lid. Eccentric action passes the carton on into the

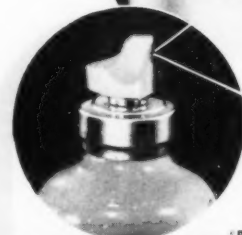
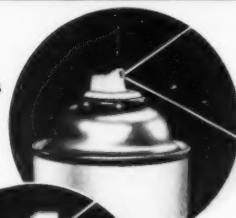
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meet all Rule 41 shipping requirements. Because the International Hand Boxer is practical, lightweight and portable, it can be taken to the carton. The International Hand Boxer is the only staple carton closing machine with separate built-in penetration and clinch control . . . and designed for convenient one-hand operation.

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This capper applies 7200 caps per hour and handles jar sizes from 6 oz. to quarts. It incorporates a special Consolidated chuck-arresting device which prevents the chuck from dropping over the jar if no cap is present. No mayonnaise ever gets on the chuck.

There are more CaPeM Screw Cappers in use than any other make. Users select them because they combine low initial cost, low operating cost, and a minimum of maintenance.

CaPeM applies any standard cap or cover and many special types at speeds ranging from 2,000 to 10,000 per hour. It handles bottles, jars, cans or jugs of any size or shape. It delivers a perfect LEAKPROOF seal.

For recommendations on improving your own capping operation, write Sales Manager, Consolidated Packaging Machinery Corp., 1400 West Avenue, Buffalo 13, N. Y.

CAPEM → THE MODERN SCREW CAPPER

filler and a star device removes the filled cartons and puts them through a conventional closing mandrel and coder. Tracks and guide rails are held by hand screws and are quickly adjusted for different container sizes. Safety devices prevent filling action if a carton is not in place and also eject a carton that is not in proper position—necessary precautions since the filling hole in these cartons is located off center. The filler also handles one-third-quart cartons. Though these are not packed at Tuscan, they are in use at several plants for packaging fruit drinks.

Now beginning to draw widespread attention, this flexible filler is expected to find increased use as a means of accommodating the varied container sizes used in dairies and at the same time increase output at lower unit costs. ●

Wine maker's bottles

[Continued from page 95]

bottles are filled, capped labeled and re-cased by modern packaging equipment, much of it developed by Gallo itself. The filler is particularly significant because, while of a type used by other beverage bottlers, this is its first application in a winery.

The unit is a 60-valve, high-speed, balanced-pressure filler that handles 200 fifths per minute, half again the speed of Gallo's conventional-type filler. Foaming is virtually eliminated because pressure in the bottle is balanced with that in the tank so the wine flows gently with a minimum of agitation. The liquid flares out in a full 360-deg. fill, forcing air up and out of the bottle.

Costly down time is reduced because the filler has an automatic lid-lifting device to speed cleaning. Instead of 50 nuts and bolts to be loosened as on other types of fillers, this equipment has only 25. After these are loosened with special wrenches, the filler bowl lid is pneumatically raised to permit hose or hand washing and sterilizing of the self-draining U-shaped tank.

On the packaging line, the bottles are re-cased in shippers imprinted in green (instead of Gallo's traditional red) to identify the new Flavor-Guard glass for distributors and retailers. This practice also encourages retailers to clean out present inventories first. ●

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 Mrs. Slaby's Noodle Co.
 Berwyn, Ill.
 Ohio Art Co.
 Bryan, Ohio
 School House Candy Co.
 Providence, Rhode Island
 The Fleming Co., Inc.
 Topeka, Kansas
 Peanut Products Co.
 Indianapolis, Ind. and Des Moines, Iowa
 Walter Johnson Cookie Co.
 Tulsa, Oklahoma
 Flavour Candy Co.
 Chicago, Illinois
 Mason Candy Co.
 Trinidad, Colorado
 Barnard Nut Co.
 Miami, Florida
 H. H. Evon Co.
 Chicago, Illinois
 Mamma's Cookies Bakeries
 Cicero, Illinois
 Whites Food Products Co.
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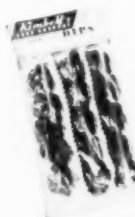
JAW SEALER-LABELERS
MODEL PJS



The new Doughboy Jaw Sealer-Labeler will do the work of two and sometimes three ordinary labeling machines. As soon as the bag touches the vacuum (air) control, the machine takes over and leaves operator's hands free to reach for the next bag. It automatically labels, seals, and if desired, codes and punches the package. The automatic cycle cuts operator motions, increases production speed and assures better packaging. Pneumatic pick-up assures *positive* single label delivery from label box to sealing jaws. Label clamp holding bar assures *positive* positioning of label at sealing jaw. Adjustable folding bar assures *positive* label folding.

CODER AND HOLE PUNCH OPTIONAL

Coder and Hole punch are optional. An embossed code is precision made from metal type which is easily placed in accessible holder at the front of the sealing jaw. The punch, made of high carbon steel, punches a clean edged, round hole exactly centered in label.



Doughboy

INDUSTRIES, INC.
 MECHANICAL DIVISION
 NEW RICHMOND, WISCONSIN, U.S.A.

Classified Advertisements

Employment
Business Opportunities
Used or Resale Equipment

Machinery and Equipment For Sale

FOR SALE: 1 5-Color Wolverine Hydro Printer on 6-Color frame, under two years old, 36" PW—complete with flying splice, web guides, positive moisture control for cellophane and tension control for polyethylene. Press presently operating everyday. Can be released for delivery March 15th. Price \$25,000.00 Write Cello-Vision Corporation, 137 East Island Ave., Minneapolis, Minnesota.

MODERN PACKAGING AND FOOD PROCESSING MACHINERY at Wonderfully Low Prices. Pneumatic Scale Automatic Carton Feeder, Wax Liners, Bottom Sealers and Top Sealing Units with interconnecting conveyors. Pneumatic Scale Tite Wrap Machine. Jones Model CMV Highly flexible Automatic Cartoner. Package Machinery Model C Transwraps, with net weight scales, bulk and dribble feeds. Electric Eyes. Stokes & Smith Model BS Stokeswrap, Auger Feed. Electric Eyes. Scandia Model SFS6F high speed automatic Wrappers with Electric Eyes. Ceco Model 40-9-1/2 TT and Model 40-18 Glue Seal Automatic Adjustable Cartoning Machines. Ceco Model A3901-12 Cartoning Machines with compression unit. Hayssen Wrappers, all sizes. Package Machinery Models FA, FA2, FA3 and FA4 Wrappers with and without Electric Eyes. Complete details and prices available on request. Union Standard Equipment Company, 318 Lafayette Street, New York 12, N.Y. Phone: CAnal 6-5334.

FOR SALE—Beck Sheeter. 56" maximum Web, 60" maximum cut off, with automatic sheeter piler and General Electric Photo Eye Control. Reply Box 1030, Modern Packaging.

Machinery Wanted

ROTOGRAVURE PRESS WANTED: Single color rotogravure press, 23" to 24" repeat either 15" or 25" printing width with unwind, web-guides, tension control and slitter-rewind for strip-chart printing. Also manually controlled rewinders for 2-1/4" to 5", 8" to 12-1/4" and 10-3/4" to 15-1/2" web widths. Address response to: H. F. Knight, Jr., 1 Curley Drive, Hudson, Massachusetts.

WANTED: Used Resina automatic screw capper or Capem Screw Capper in good working condition. Reply Bar's Products Supply, Inc., Box 146, Holly, Mich.

Materials Wanted

WANTED: Polyethylene Film Trim and other plastic scrap. Claude P. Bamberger, Inc., One Mount Vernon Street, Ridgefield Park, New Jersey. Telephone: HUbbard 9-5330.

Help Wanted

WANTED—Manufacturers Representative—Unusual sales opportunity for salesmen calling on converters operating rotogravure printing, coating and laminating equipment for paper, film, foil, board, packaging and plastics. Sell engraved cylinders for a well known company of high reputation. Increase your income by representing us in your regular territory, on a protected basis. We will help you develop accounts. We require consistent personal calls. Replies will be held confidential, of course. Send complete resume to Box 1033, Modern Packaging.

FLEXIBLE PACKAGING SALESMEN—Metropolitan New York converter and printer of polyethylene and cellophane has opening for experienced salesman with following. Opportunity also present to increase earnings by representing parent company in sales of folding cartons. Reply Box 1035, Modern Packaging.

PACKAGING ENGINEER—2 or 3 years packaging engineering experience with metal, glass, and plastics. For evaluation of containers and container materials, caps, closures, and aerosols, in chemical specialty field. Contacts within company and with suppliers will be extensive and important. Engineering degree required, preferably mechanical. Excellent opportunity in new position in our Research and Development Division. Send complete resume to: W. H. O'Shaughnessy, Johnson's Wax, Racine, Wisconsin.

PACKAGE ENGINEER—Opportunity with pharmaceutical manufacturer. Need man with potential for future growth. Engineering desirable. Minimum 5 years experience in field with knowledge of methods, materials and specifications. Ability to sell new package ideas and improvements to management. Liberal benefits and stock option. Starting salary to \$8,000. Reply Box 1040, Modern Packaging.

SALES REPRESENTATIVE — Prominent manufacturer of flexible packaging papers sold to converters and industrial consumers has opening for two Sales Representatives, one covering Ohio, Indiana and lower Michigan, the other covering Southeastern United States as far north as Philadelphia. Salary plus expenses and incentive bonus. Excellent opportunity for young alert, industrious salesman. Send resume of experience and education to Box 1036, Modern Packaging.

PACKAGING PERSONNEL

Positions Filled and Secured. A confidential Nationwide Service for employers seeking personnel and individuals seeking new positions. Inquiries invited. Reply to Graphic Arts Employment Service, Est. 1952, Helen M. Winters, Manager: Dept. PAC-3, 307 East 4th Street, Cincinnati 2, Ohio. Phone CHerry 1-2202.

OFFSET FOLDING CARTON SALESMAN—Metropolitan New York Folding Box Manufacturer with large complete folding box facilities seeks experienced salesman with following among users of fine lithographed cartons. All work done on our own premises to insure quality. Our men know of this ad. Reply Box 1034, Modern Packaging.

OPENING AVAILABLE in old established company for young man with creative ideas in packaging and design to assist in sales and operations. State experience and salary desired. Reply Box 1031, Modern Packaging.

CORRUGATED PRODUCT DEVELOPMENT SPECIALIST: Large, aggressive manufacturer of corrugated products requires man for Product Development Department. Wonderful opportunity in Chicago area for young man, college-trained, with 3-5 years experience as a packaging or sales engineer with corrugated products. Salary open. All replies confidential. Reply Box 1038, Modern Packaging.

FLEXOGRAPHIC INKS well known N.Y. Mfg. expanding nationally seeks representation in several areas. Excellent profit opportunity for company or salesman (part or full time) visiting Paper and Film Converters. Thorough knowledge of inks not imperative as technical assistance is available but good connections with Flexo Ink Users is indispensable. Write in confidence POB 3, Corona 68, N.Y.

PRODUCTION MANAGER with M.E. or C.E. degree preferred, not mandatory if sufficient practical experience. Good knowledge of High Speed Flexo-printing plus ability to refine present manufacturing processes. Ability to supervise and delegate authority necessary prerequisites. Salary open. Location East. Reply Box 1039, Modern Packaging.

Situation Wanted

A BRITISH COPYWRITER—B. A. Oxford University—handling entire major packaging account in London agency is interested in working in U.S.A. Prepared to go on either agency or client side where selling copy plus creative originality and packaging knowledge are needed. Write Gerard Lichfield, 13 Gwendolen Ave., London S.W. 15, England.

SALES MANAGER, with over 5 years' experience in all major phases of Sales and Sales Management: handling of large accounts, training and supervision of salesmen. Excellent knowledge of packaging and diverse paper products, especially polyethylene sheeting, tubing, extrusion coatings and laminations. B.B.A. Reply Box 1032, Modern Packaging.

Miscellaneous

EUROPEAN MANUFACTURER of quality self-adhesive tapes e.g. cellulose and vinyl wants to contact companies all over the world interested in selling tapes. Special wishes re lengths, widths and put-up are attended to. Manufacturing licenses are also available in some countries. Reply Box 1037, Modern Packaging.

RATES FOR CLASSIFIED ADVERTISING

ALL CLASSIFIED ADVERTISEMENTS PAYABLE IN ADVANCE OF PUBLICATION

Closing date: 26th of second preceding month, e.g., March 26th for May issue
Per inch (or fraction) \$30.00. Each 3 inches or fraction (boxed) \$15.00 extra.

Situation Wanted ads 1/3 of above rates.

For purpose of establishing rate, figure approximately 50-55 words per inch.

Address all communications to Classified Advertising Department,

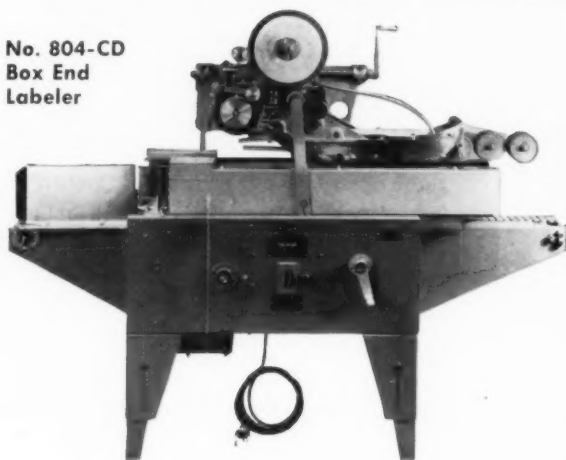
Modern Packaging, 575 Madison Avenue, N. Y. 22, N. Y.

Modern Packaging reserves the right to accept, reject or censor classified copy.

Here are 3 new OLIVER LABELERS

...to heat-seal a large or small
colorful, roll-type label to
the side, end, or top of a
carton or overwrapped package

No. 804-CD
Box End
Labeler



End Labeler

Handles boxes 7 1/2" to 16" high, 3 1/2" to 5 1/4" wide, 1" to 10" long. Heat-seals roll-type label to end of package. Label size: 1" to 5" wide, 2" to 6" long. Speeds up to 80 a minute.

Top Labeler

Handles cartons, bread, cluster buns. Packages: 6" to 18" long, 2 1/2" to 10" wide, 1 1/4" to 7 1/2" high. Heat-seals roll-type label as large as 3" x 5" to package top at 40 to 100 a minute. Or label as large as 6" x 5" at 40 to 80 a minute.

Side Labeler

Handles packages 1 1/4" to 2 3/4" long, 5 1/8" to 10 3/8" wide, 3 1/16" to 7 3/8" high. Heat-seals labels up to 3" x 3 1/2" at 120 a minute. Frequently used to seal a carton pouring spout.

Each of these three Labelers opens new opportunities to merchandise and promote sales of a product. It can also serve a functional use: The side labeler is used to heat-seal a label over a pouring spout.

An Oliver Labeler can save you money. The entire labeling operation costs less than changing the design of an overwrap or box. Attractive labels come in low-priced rolls that can be changed in a few seconds. They are easy to handle and stock.

The design of Oliver Labelers is basic for the development of solutions to many labeling problems. Remember, an Oliver Labeler can be built to handle packages in a range of sizes or for a single purpose. Let our packaging engineers recommend a paying solution to your particular labeling problem. Write today for all the facts!

Oliver PACKAGING
DIVISION
MACHINERY COMPANY
445 6th, N. W., Grand Rapids 4, Michigan



Need a tissue you can *stitch*?

Here's a tissue that can be sewed like cloth—we can't list the many uses for it here. And this is just one example of the many special types of tissues developed by Crystal. Maybe you have a need for tissues that can be twisted and woven—or laminated to films and foils—or impregnated with chemicals. Whatever your particular requirements, chances are that Crystal has or can develop the special tissues you need.

Send the coupon
for technical
information.



First name in tissues
for over 60 years

MP3-59

The Crystal Tissue Company, Middletown, Ohio

I want samples and more information on Crystal
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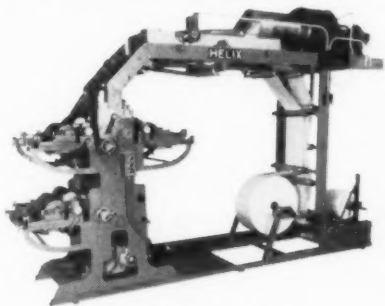
MODERN PACKAGING



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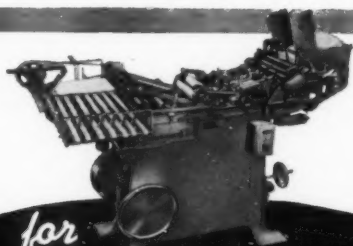
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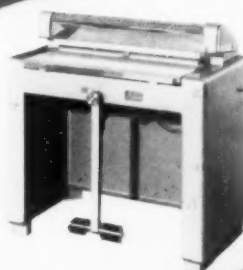
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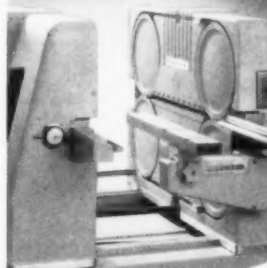
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Section 12

TWX • TON 277



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This 47-pound Royal Electric Typewriter gets shock-absorbent protection from 3½-pound DYLITE foam cocoon

Hard to believe? It's true! It's the first time that an electric typewriter has been packaged in a plastic material. The material: DYLITE expandable polystyrene. One of the key reasons behind the development of this pack is DYLITE's moldability. It can be molded to fit the intricate contours of any size or shape, thus holding movable parts firmly in place. The new DYLITE pack cuts shipping costs since it weighs only one-third as much as the old container; and its simplified design has reduced handling time four and a half minutes. DYLITE offers an entirely new concept in

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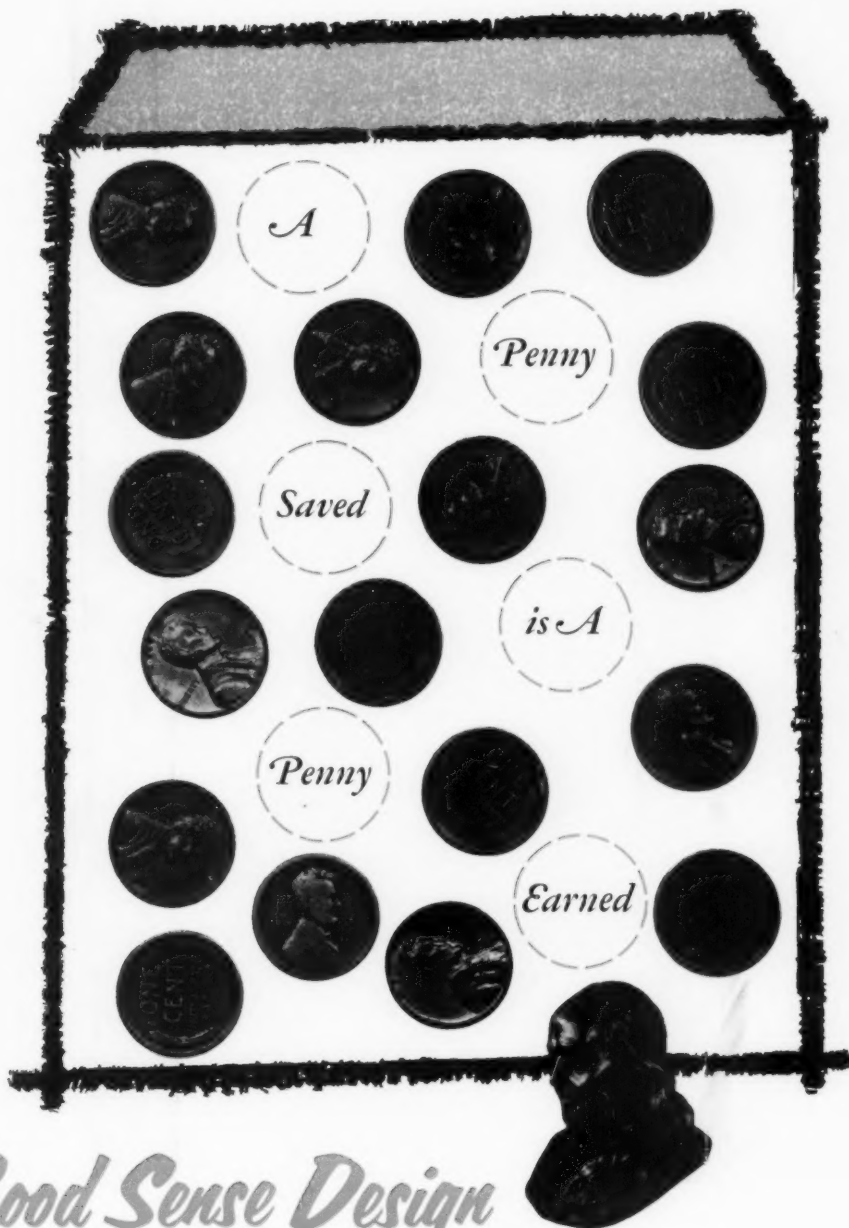
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